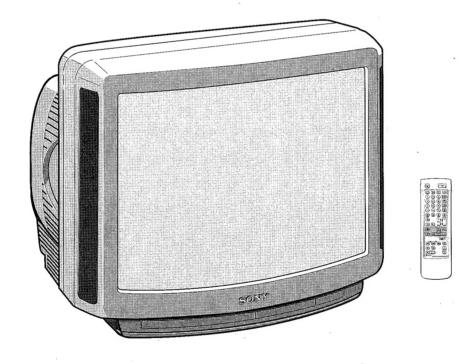
SERVICE MANUAL

AE-2F CHASSIS

MODEL CHASSIS NO. MODEL CHASSIS NO. COMMANDER KV-X2993E Spanish SCC-G78C-A SCC-G76C-A RM-831 KV-X2991A Italian KV-X2993B RM-831 SCC-G75C-A KV-X2991D SCC-G72D-A RM-831





TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television system	Stereo system	Channel coverage	Color system
Italian	B/G/H, D/K	GERMAN Stereo	ITALIA VHF:A-H2 (C) UHF:21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
French	B/G/H, D/K L, I	GERMAN Stereo	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
AEP	B/G/H, D/K	GERMAN Stereo	PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)
Spanish	B/G/H, D/K	GERMAN/NICAM Stereo	PAL B/G VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC4.43, NTSC3.58 (VIDEO IN)

MODEL	Italian	French	AEP	Spanish
Power Consumption	137W	154Wh	153W	154W

SPECIFICATIONS

Picture tube

Super Trinitron

Approx. 72 cm (29 inches)

(Approx. 68 cm picture measured

diagonally) 110° -deflection

Input/Output Terminals

[REAR]

W 1 21-pin Euro connector

(CENELEC standard)

Inputs for audio and video signals

- inputs for RGB
- outputs of TV video and audio signals
- : 2/q 2 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- · outputs for audio and video signals (selectable)
- Audio outputs (variable) phono jacks

[FRONT]

- ... 3 Video input-phono jack
- Audio input-phono jacks
- q 3 S video input 4-pin DIN
- Headphone jack: Stereo minijack Sound output
 - 2x12W RMS
 - 2x30W Music power
- Power consumption
- Approx. 153W

Dimensions

Approx. 676 x 557 x 528 mm (w/h/d)

Weight

Approx. 48 kg

Supplied accessories

RM-831 Remote Commander (1)

RM-860 Scroll Commander (1) IEC designation R6 batteries (2)

FASTEXT, TOPTEXT

Other features

100 Hz Digital Plus

[RM-831]

Remote control system infrared control

Power requirements

1.5V dc

1 battery IEC designation

R6 (size AA)

Dimentions

Approx. 65 x 225 x 21 mm (w/h/d)

Weight

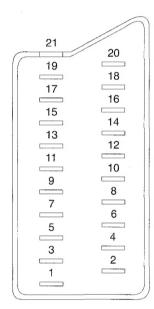
Approx. 157g (Not including Batteries)

Design and specifications are subject to change without notice.

KV-X2991A	KV-X2993B	KV-X2991D	KV-X2993E
OFF	OFF	OFF	OFF
OFF	OFF	OFF	OFF
ON	ON	OFF	OFF
OFF	OFF	OFF	OFF
ON	ON	ON	ON
ON	ON	ON	ON
ON	ON	ON	ON
OFF	OFF	OFF	OFF
OFF	OFF	OFF	OFF
OFF	OFF	OFF	OFF
ON	ON	ON	ON
ON	ON	ON	ON
OFF	ON	OFF	OFF
ON	ON	ON	ON
OFF	OFF	OFF	OFF
OFF	ON	OFF	OFF
OFF	OFF	OFF	OFF
OFF	OFF	OFF	OFF
OFF	OFF	OFF	OFF
Italiano	Français	Deutsch	None
	OFF OFF ON ON ON ON OFF OFF OFF OFF ON ON ON OFF OFF	OFF	OFF

21 pin connector (W 1:2)





Pin No.	1	2	Signal	Signal level
1	®	®	Audio output B (right)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
2	®	®	Audio input B (right)	Standard level : 0.5V rms Input impedance : More than 10kohm*
3	®	®	Audio output A (left)	Standard level : 0.5V rms Output impedance : Less than 1kohm*
4	®	®	Ground (audio)	
5	®	®	Ground (blue)	
6	®	®	Audio intput A (left)	Standard level : 0.5V rms Input impedance : More than 10kohm*
7	®	r	Blue input	0.7 ± 3dB, 75 ohms, positive
8	®	®	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More than 10kohms Input capacitance : Less than 2nF
9	®	®	Grounf (green)	
10	®	®	Open	
11	®	r	Green	Green signal: 0.7 ± 3dB, 75 ohms, positive
12	®	®	Open	
13	®	®	Ground (red)	
14	®	®	Ground(blanking)	
	®	-	Red input	0.7V ± 3dB, 75 ohms, positive
15	-	®	(S signal) croma input	$0.3V \pm 3dB$, 75 ohms, positive
16	®	r	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75ohms
17	®	®	Ground (video output)	
18	®	®	Ground (video input)	
19	®	®	Video output	1V ± 3dB,75ohms, positive sync:0.3V(-3+10dB)
	®	-	Video input	$1V \pm 3$ dB,75ohms, positive sync:0.3V(-3+10dB)
20	-	®	Video input Y (S signal)	1V ± 3dB,75ohms, positive sync:0.3V(-3+10dB)
21	®	®	Common ground (plug, sheild)	

® Connected

r Not Connected (open)

* at 20Hz - 20kHz

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVAL OF THE ANODE CAP.

WARNING!!

AN ISOLATING TRANSFORMER SHOULD BE USED DURING ANY SERVICE WORK TO AVOID POSSIBLE SHOCK HAZARD, DUE TO A LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY SHADING AND MARKED A ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLIMENTS PUBLISHED BY SONY.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÈ LORS DE TOUT DÈPANNAGE. LE CHÁSSIS DE CE RÈCEPTEUR EST DIRECTEMENT RACCORDÈ Á L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS Á LA SÈCURITÈ !!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE À SUR LES SCHÈMAS DE PRINCIPE, LES VUES EXPLOSÈES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÈCURITÈ DU FONCTIONNEMENT, NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÈRO DE PIÈCE EST INDIQUÈ DANS LE PRÈSENT MANUEL OU DANS DES SUPPLÈMENTS PUBLIÈS PAR SONY.

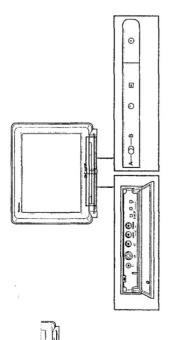
The operating instructions mentioned here are partical abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.



Overview

This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set - front



Symbol	Name	Refer to page
Θ	Main power switch	39
Ð	Standby indicator	39
A-CD-B	Stereo A/B indicators	14
C:	Headphones jack	46
€3, €3, €3	Input jacks (S-video/video/audio)	46
9-17-1	Function selector	39
+ - + + - + + + + + +	Adjustment buttons for function selector	39

	B COO B B CO		Full-Function side
Remote Commander RM-831			Simple side
Scroll Commander RM-860		ne SAT button does not operate with this TV.	

GB

TV/Teletex	TV/Teletext operation		Menu operation	eration	
Symbol	Name	Refer to Page	Symbol	Name	Refer
谷	Mute on/off button	40	MENU	Menu on / off button	
Ð	Standby button	39		Select buttons	
0	TV power on/TV mode selector	39	Š	OK (confirming) button	
	DUITOIL		ŧ	Back button	
16	Teletext button	40	★ /OK	Scroll Commander: Roller to select/	cf
Ģ	Input mode selector	40		confirm menu functions	
Ō	Output mode selector	47			
1,2,3,4,5,6,	Number buttons	39	Video operation	eration	
7,0,3, and 0			Symbol	Name	Refer
	Double-digit entering button	6E .	9		
O	Direct channel entering button	36	MDP	Video equipment serector	
4	Volume control button	39	*		
PROGR +/-	PROGR +/- Programme selectors	39	•	Video equipment operation	
9	Teletext page access buttons	43	PROGR +/-	_	
•	Picture adjustment button	14			1
4	Sound adjustment button	14			
•	On-screen display button	40			
(a)	Teletext hold button	43			
6	Time display button	40			
	Fastext buttons	43			

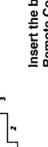
Refer to Page

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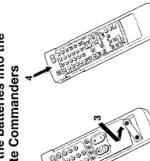
33 33 33

Getting Started

Step 1 Preparation



Insert the batteries into the Remote Commanders









Refit the outside cover making sure that the Full-Function side is visible to use the menu in Step 3.

Check the correct polarity.

Remove the cover.

Step 2 Connection

Check the correct polarity.

To go back to main menu: Keap pressing ←.

Connect the aerial

To go back to the normal TV picture: Press MENU, Normal TV picture will be restored after one minute if menu functions are not selected.

Note on the Demo function:

the menu. Then you should preset the channels (up to 60 channels) by choosing either the automatic or manual method. Once you have set up the TV, you can choose the language of

The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.

Before you begin Check that the Full-Function side of the Remote Commander is

visible.

Locate Menu operation buttons on the Remote Commander.

They are shaded in the illustration at the left. They are shaded in the illustration at the left.

GB

Easy Menu operation using the Scroll

roller downwards to move the cursor downwards, press the roller to confirm a selection. The other buttons on this commander have the same functions as the respective buttons Move the roller upwards to move the cursor upwards, move the In addition to our double-sided Remote Commander, your TV set is supplied with an extra Remote Commander. The "Scroll Commander" works with a roller for convenient, fast-access operation of the menu functions.

on the double-sided Remote Commander Choose a language

Depress

on the TV.

The TV will switch on. If the standby indicator on the TV is lit, press \Box or a number button on the Remote Commander. MENU Press the MENU button. The "LANGUAGE« menu appears. (See Fig.

Š **+**□ | ▷ I •

Select the language you want with \triangle + or ∇ -, and then press OK.

helect No and press OX

Display the Menu

Press the ← button. The main menu appears. (See Fig. 2)

Now, choose one of the methods described overleaf: "Preset Channels Automatically"

"Preset Channels Manually".

Sequential demonstration of the menu functions.
Press MENU to stop the function. function:
If you choose Demo
on the main menu,
you can see a
sequential

000 Fit an IEC aerial connector attached to 75-ohm coaxial cable (not supplied) to the Tf socket at the rear of the TV.

To stop automatic channel presetting: Press ← on the Remote Commander. With this method, you can preset all receivable channels at once.

which programme positions. For details, see "Using the Programme Table" on page 42. nels are stored on presetting the

You can sort the programme positions to have them appear on screen in the order you like. For details, see "Sorting the Programme Positions" on page 36.

Programme names are automatically taken from Teletext if available. If not, please refer to page 37 "Captioning a station

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one.
You may also altocate
programme numbers to
various video input

Historic.

Press ← to go back to the previous position.

To go back to main f you have made a nistake: Keep pressing 4e.

To go back to the normal TV picture: Press MENU.

Select DIO and press

MANUAL PROGRAMME PARSET

MANUAL PARSET

MANUAL PROGRAMME PARSET

MANUAL PARSET

MANUAL PROGRAMME Select DE 6

Keep pressing ∇- to select programme numbers higher than 10. Using \triangle + or ∇ –, select the programme position (number button) to which you want to preset a channel, and press OK.

2 B/G (10ff)

To tune in a channel by frequency:
After selecting F in step 6, enter three digits using the number buttons.
Press OK.

Select NV and press

Using △+ or ▽-, select C (to preset a regular channel), or F (to Then press OK. The CH position will be highlighted. (See Fig. 8.) tune in by frequency), or S (cable channet) and press OK. The first element of the "CH" number will be highlighted. If you have selected EXT in step 5, select the video input source with \triangle + or ∇ -. (See Fig. 9.) Select if necessary the TV broadcast system (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT) with \triangle + or ∇ -.

if you don't know the channel number, go to step "7- Search".

There are two ways to preset channels. If you know the channel number, go to step "7-Manual",

СB

 Select the first element of the "CH" number with △+ / ▽- or the number buttons and press OK.
The second element of the "CH" number will be highlighted.

2 8/G (Jam toff)

Fig. 10.

2 8/6 (35 (off)

Fig.11,

Select the second element of the number with $\triangle + / \nabla$ – or the number buttons. The selected number appears. (See Fig. 10.) þ

The "SEARCH" position is highlighted and the selected channel is Press OK

Press OK until the cursor appears by the next programme position. Repeat steps 3 to 7 to preset other channels. now stored. (See Fig. 11.) P

-a Press OK repeatedly until the colour of the SEARCH position 7 Search

2 875 C50 (▲♥)

Fig. 13.

þ If you have made a mistake:
Priess & 10 go back to the previous position.
To go back to main menu:
To go back to main menu:
To go back to the normal

Press MENU.

Start searching for the channel with \triangle + (up) or ∇ - (down). The CH position changes colour. (See Fig. 12.)
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)

Press OK if you want to store this channel. If not, press \triangle + or ∇ to continue channel searching.

d Press OK until the cursor appears by the next programme position.

Repeat steps 3 to 7 to preset other channels.

35

Preset channels automatically

Select "Preset" with \triangle + or ∇ - and press OK. The "PRESET" menu appears. (See Fig. 3.)

Select if necessary the TV broadcast system with \triangle + or ∇ - and press OK. (B/G for western European countries, D/K for eastern European countries) The first element of the "PROG" number will Select "Auto Programme« with \triangle + or ∇ - and press OK. The "AUTO PROGRAMME« menu appears. (See Fig. 4.) Press OK.

Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with \triangle + or ∇ - or the number buttons (e.g. For "04", be highlighted.

Select 🗖 🗖 and press OX

PR06 0.1

The second element of "PROG" will be highlighted. select "0" here) and press OK

Select the second element of the double-digit number with \triangle + or ∇ - or the number buttons (e.g. For "04", select "4" here) Select "C" or "S" with \triangle + or ∇ – and press OK. The automatic channel presetting starts. (See Fig. 5.) and press OK.

When presetting is finished the preset menu reappears. All available channels are now stored on successive number buttons. (Press MENU to restore normal TV picture.)

Preset channels manually

Select »Manual Programme preset» with \triangle + or ∇ - and press OK. OK. The »MANUAL PROGRAMME PRESET» menu appears. (See Fig. 7.) 1 Select "Preset" with △+ or ▽- and press OK. The "PRESET" menu appears. (See Fig. 6.)

Additional Presetting Functions

This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

Before you begin

- Check that the Full Function side of the Remote Commander is visible
 - Locate the Menu operation buttons.

Sorting Programme Positions

PROGRAMME

With this function, you can sort the programme positions to a preferable order.

- Press MENU to display the main menu.
- Select "Preset" with △+ or ▽- and press OK.
- Select "Programme Sorting" with \triangle + or ∇ and press OK. The "PROGRAMME SORTING" menu appears. (See Fig. 14.) The "PRESET" menu appears.

25555555 25555555 2555555 255555 255555 25555 25555 25555 25555 255 2555 2555 2555 2555 255 2555 2555 2555 255 255 255 255 255 255 255 255 255 255 255 255 2

741 VHS C52 BBC1 C61 BBC7 11060 BHM

Move PR8 to P.

Using \triangle + or ∇ -, select the programme position you want to

Using \triangle + or ∇ -, select the programme position to which you want to move the selected programme and press OK. Now the two programme positions have been sorted. (See Fig. 16.) move to another programme position and press OK.
The colour of the selected position changes. (See Fig. 15.)

Fig. 15. Fig. 14.



(i)

Fig. 16.

if you have made a mistake:
Press ← to go back to the previous position.

To go back to main Keep pressing ←.

Tuning in a Channel Temporarily

You can tune in a channel temporarity, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

For higher programme positions:
The display scrolls automatically.

Press C on the Remote Commander. For cable channels, press C twice. The indication "C" ("S" for cable channels) appears on the screen.

Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4). The channel appears. However, the channel will not be stored.

If you have made a mistake:

Thess ≠ to go back to the previous position.

To go back to main menu.

To go back to main menu.

To go back to the momal TV picture:
Press MEVU.

MANUAL PROGRAMME

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROGR 4/- buttons. However, the skipped programmes may still be called up when you use the

Press MENU to display the main menu.

Select »Manual Programme Preset« with △+ or ▽- and press

Using \triangle + or ∇ -, select the programme position which you want

Press △+ or ▽- until --- appears in the SYSTEM position. (See Fig. 18.)

When you select programmes using the PROGR +/- buttons, the programme position will be skipped. Press OK. (See Fig. 19.)

Captioning a Station Name

MANUAL PROGRAMME

Flg. 19.

Flg. 18.

Fig. 17.

Programme names are automatically taken from Teletext if available. However you can also 'hame' a channel or an injut video source using up to five characters (letters or numbers) to be displayed on the 'IY screen (e.g., BBCT). Using this function, you can easily identify which channel or video source you are

Press MENU to display the main menu.

Select "Preset" with \triangle + or ∇ - and press OK. The "PRESET" menu appears.

Select »Manual Programme Preset« with △+ or ▽- and press OK. The »MANUAL PROGRAMME PRESET« menu appears. (See Fig. 20.)

Using \triangle + or ∇ -, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.

To go back to the normal TV picture: Press MENU.

element will be highlighted. Select other characters in the same way. If you want to leave an element blank, select – and press OK. (See Fig. 21.) Select a letter or number with △+ or ▽- and press OK. The next

After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 22.)

Repeat steps 5 and 6 to caption names for other channels.

Select "Preset" with \triangle + or ∇ - and press OK. The "PRESET" menu appears.

The "MANUAL PROGRAMME PRESET« menu appears. (See Fig.17.)

g

to skip and press OK.
The "SYSTEM" position changes colour.

Repeat steps 4 to 6 to skip other programme positions.

Fig. 20. Flg. 21.

37

perating Instructions

MANUAL PROGRAMME Manual Fine-Tuning PRESET Committee Normally, the AFT/automatic fine-tuning

Normally, the AFT(automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

- Press MENU to display the main menu.
- Select "Preset« with △+ or ▽- and press OK. The "PRESET« menu appears.
- Select »Manual Programme Preset« with △+ or ▽- and press
- OK. The »MANUAL PROGRAMME PRESET« menu appears. (See Fig. 23.)
- Using Δ + or ∇ , select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.
 - Fine-tune the channel with \triangle + or ∇ so that you get the best TV reception. As you press the cursor buttons, the frequency changes from –15 to +15. (See Fig. 24.)

To reactivate AFT
(automatic fine tuning):
Repeat from the
beginning and select
"ON" in step 5.

After fine tuning, press OK.
The cursor appears beside the next programme position (at the left margin). (See Fig. 25.) Now the fine-tuned level is stored. Repeat steps 4 to 6 to fine-tune other channels.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

GB

Switching on

0000

Depress Oon the TV.

Switching off temporarily

Press ψ on the Remote Commander. The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press ○, PROGR +/-, or one of the number buttons on the Remote Commander.

Switching off completely

Depress @ on the TV.

Selecting TV Programmes

Press PROGR +/- or press number buttons.

Press -/--, then the numbers. For example, if you want to choose 23, press -/--, 2, and To select a double-digit number

Adjusting the Volume

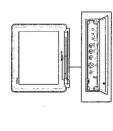
Press 4/-.

and if the standby indicator on the TV is lit, the TV is in standby mode. Press ⊙ or one of the number buttons to switch it on.

Operating the TV Using the Buttons on the TV

With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press P—G—G button repeatedly until the programme number, Δ (for volume), or G) (for video input picture) appears. Then adjust with the -/+ buttons.
 - Press -/+ buttons to switch on the TV from the standby



39

controls to the factory preset level (RESET symbol →• ← is displayed). Press -/+ simultaneously to reset picture and sound

Watching the TV

Select NV and press 0k FREGRAMME PRESST. 1 OF SEARCH LABEL 1 OF SEARCH L

Flg. 24. Fig. 23.

* 3 1 C45(off)

000 (+ D)

> Salvet NV and press fix PROS.CH LABIL 90530 90530 12 C42 12 C42 14 C44 15 C45 15 C45 25 8802 1 025 8802 2 042 8803 3 026 04 4 034 174 5 035 174 Flg. 26. Using \triangle + or ∇ -, select the programme position you want to block and perss $\bigcirc K$. The CH and LABEL, of the selected programme number, change colour indicating that this programme is now blocked. You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

Select "Parental Lock« with △+ or ▽− and press OK. The "PARENTAL LOCK« menu appears. (See Fig. 26.)

Select "Preset" with \triangle + or ∇ - and press OK. The "PRESET" menu appears.

Press MENU to display the main menu.

Parental Lock

PARENTAL LOCK

PRUG CH LABEL PRUS CH TABEL P 0 AVI YES 1 C22 BRC2 2 C42 BRC1 2 C42 BRC1 1 C26 C4

If no picture appears when you depress ⊙ on the TV

Fig. 27.

Repeat step 4 to block other programme positions.

(See Fig. 27.)

If you try to select a programme that has been blocked:
The message "LOCKED" appears on the blank TV screen.

On the "PARENTAL LOCK" menu, select the programme position you want to unblock with \triangle + or ∇ -. Cancelling blocking

Press OK.
The CH and LABEL change to normal colour indicating that the blocking has been cancelled.

For details of the teletext operation, refer to page 43.

For details of the video input picture, refer to page 47.



To make the Programme Table disappear Press MENU.

Watching Teletext or Video Input

Watching teletext

Press ® to view the teletext.

Press three number buttons to select a page.

Press one of the coloured buttons for fastext operation.

Press © (PAGE +) or © (PAGE -) for the next or preceeding

page. To go back to the normal TV picture, press ○.

Press - repeatedly until the desired video input appears. To Watching a video input picture

go back to the normal TV picture, press ○.

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications
Press ③ once to display all the indications. They will disappear after some accords.

Press ⑤ twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

Muting the sound.

Press ≪, To resume normal sound, press ≪ again.

Displaying the time

The struction is available only when teletext is broadcast.

To make the time display disappear, press © again.

Displaying of the Programme Table

Press OK. A Programme Table will be displayed on the right side of the TV screen (See. Fig.28)

Press PROGR +/- or select the desired programme position using \triangle + or ∇ - and press OK. Selecting of TV programmes



he previous position. To go back to the main Press ← to go back to

you have made a

Keep pressing ←.

To go back to the normal TV picture: Press MENU.

Note: HUE is only available for NTSC colour system.

Fig.28.

Note on LINE OUT:
The audio level and the dust sound mode output from the O+ jack on the TRADHONES.
VOLUME and DUAL SOUND settings.

Adjusting the Picture and Sound

PICTURE CONTROL SOUND CONTROL

Adjusting and Setting the TV Using

the Menu

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can change the aspect ratio of the TV display for wide screen effect. You can also select dual sound (pilingual) programmes when available or adjust the sound for listening with the headphones (7).

Press
(for picture) or
(for sound) on the Remote Commander.

Control«, then press OK.
The "PICTURE CONTROL« or "SOUND CONTROL« menu appears. (See Fig. 29 or Fig. 30) Press MENU and select "Picture Control" or "Sound

GB

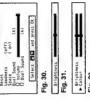
Select N and press 0K

Flg. 29.

(4:3)

Using △+ or ▽-, select the item you want to adjust and press Adjust the setting with \triangle + or ∇ – and press OK. The cursor appears beside the next item (at the left margin). OK.The selected item changes colour. (See Fig. 31) (See Fig. 32) For the effect of each control, see the table below.

Repeat steps 2 and 3 to adjust other items.



 Brightness	Fig. 31.	Brightness Colour	Fig. 32.

Brightness	Fig. 31.	Brightness Colour	Fig. 32.

Fig. 31.	Brightness Colour	Fig. 32.
ш. ;		ш.

Effect of each control

PICTURE CONTROL	Effect
Contrast	Less ——i—— More
Brightness	Darker ——I—— Brighter
. Colour	Less —— More
Hue	Greenish ——I —— Reddish
Sharpness	Softer ————Sharper
Reset	Resets picture to the factory preset levels.
Format	4:3: Normal 16:9: Wide screen effect

SOUND CONTROL	Effect
Volume	Less More
Treble	Less —I— More
Bass	Less —I— More
Balance	More left —!— More right
Reset	Resets sound to the factory preset levels.
Loudness	off: Normal on: When listening to low volume sound.
Space	off: Normal on: Obtain acoustic sound effect.
Dual Sound	A : left channel B : right channel stereo mono The selected mode of the A-CD-B indicator on the TV lights up. (for NICAM broadcasts see next page)
Headphones:	
? Volume	Less More

41

A: left channel B: right channel STEREO MONO

O Dual Sound

When watching a video input source with stereo sound: Seleco Sound: You can select DUAL SOUND to change the sound.

Teletext

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table. Using the Programme Table PROGRAMME TABLE

To go back to the normal TV picture: Press MENU.

From the main menu, select "Programme Table" with $\triangle +$ or

To select a programme using this menu select the programme number with \triangle + or ∇ – and press OK. To scroll to higher programme numbers, press \bigtriangledown -. The selected programme appears.

TIMER

To check the remaining time: Press (3). thmer: Select "OFF" in step 3. Fo switch off the

Using the Sleep Timer

You can select a time period after which the TV automatically switches into standby mode. From the main menu, select "Timer" with $\triangle +$ or $\bigtriangledown -$ and press OK. The "TIMER" menu appears. (See Fig. 34.) Press OK.



Select MM and press OK.

Fig. 33.

Teletext errors may occur if the broadcasting signals are weak. With the simple side of the Remote Com-

You can'switch teletext on and off, operate Fastext, and directly select page numbers.

Note: Fastext operation is only possible, if the TV station broadcasts Fastext signals.

TV stations broadcast an information service called Teletext via the IV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

PROCCH LARI, PROCCH LURG.

Switching Teletext on and off

Select the TV channel which carries the teletext broadcast you want to watch.

Press © to switch on teletext.
A teletext ageg will be displayed (usually the index page).If
there is no teletext broadcast, *No text available* is displayed on
the informa-tion line at the top of the screen.

To switch teletext off Press ().

Selecting a teletext page With direct page selection

Use the number buttons to input the three digits of the chosen page number. If you have made a mistake, type in any three digits. Then re-enter the correct page number.

With page-catching

Catching" will be displayed on the information line. Press OK. The requested page will appear in a few seconds. Select a teletext page with a page overview (e.g. index page). Press OK. Using △+ or ▽-, select the desired page. "Page

Press (to resume normal teletext reception. Accessing next or preceding page

The next or preceding page appears. Press (PAGE +) or (PAGE -).

Superimposing the teletext display on the TV programme

Press (once in teletext mode or twice in TV mode.

Press again to resume normal teletext reception.

Preventing a teletext page from being updated Press (HOLD), The HOLD symbol "(3" is displayed on the Press

to resume normal teletext reception.

Using Fastext

With Fastext you can access pages with one key stroke When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.

Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds. 43

After selecting the time period, press OK.
The cursor moves back to the left margin and the timer starts

The time period (in minutes) changes as follows: 10→20→30→40→50→60→70→80→90

The time period option changes colour. Select the time period with △+ or ▽-. counting.

One minute before the TV switches into standby mode, a message is displayed on the screen.

P3 P4 P5 P6 456 234 200 179 301 303 550 345 300 444 255 240 118 127 Select NG and press Allocate Bank PROGLABEL ON WAS - 04 MIV OU WAS - 04 MIV OI WAS - 05 SKY OZ - 88C1 C 06 IIV P1 P2 P 300 255 4 200 120 3 100 220 3 128 321 2 400 238 2 Press (if Teletext is not on already) and MENU to show the TELETEXT MENU display. You can store up to 30 pages in the "Teletext page bank system". In this way you have quick access to the pages you There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

BANK O S J

Fig.40.

Select "PRESET USER PAGES« with △+ or ▽- and press Select the desired bank with \triangle + or ∇ - and press OK. The cursor will go to the first position (P1) of the preferred pages.

Input the three digits of your first preferred page with the

number buttons and press OK. The cursor will go to the second position.

To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons. Press MENU. The selected time is displayed at the top in the left-handed corner. At the requested time, the page will be displayed. You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To cancel the request: Select "Subpage" and press OK.\.

Select No and

This TV is provided with a menu-guided feletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the

Using the Teletext Menu

Press MENU. The menu will be superimposed on the teletext

display. (See Fig. 35)

Using \triangle + or ∇ –, select the teletext function you want and press OK. (See Fig. 36)

Fig. 35.

See page 19 for information about presetting and operating the user pages.

USER PAGES/PRESET USER PAGES

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

To select the desired subpage, enter four digits using PROGR+/- or the number buttons. (e.g. enter 0002 for the

second page of a sequence).

If two broadcasting stations use the same Teletext: You can preset one bank to 2 different





For convenient reading of a teletext page, you cari enlarge the teletext display with the ability to soroll up and down the serceen. After having selected the tunction, an information line "Top/Bottom/Full" will be displayed. (See Fig. 37)

Press △+ for "Top" to enlarge the upper half. For "Bottorn"

keep pressing $\nabla -$, to enlarge the lower half. Press OK for »Full« to resume the normal size.

Press (2) to resume normal teletext reception.

TEXT CLEAR

Some of the features may not be available depending on the Teletext service.



Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset alf 6 page numbers available, press OK without inserting any number. After having finished the presetting press OK repeatedly until the cursor appears besides the next bank at the left margin.

Select "Allocate Bank« with △+ or ▽- and press OK.



answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" witl be displayed. (See Fig. 39)

Sometimes pages contain concealed information, such as

REVEAL

Note on Subtitles:
If the subtitles are not
broadcast on page
888, please select the
subtitle page using
the number buttons.

Parket 1

Fig. 39. Using \triangle + or ∇ -, select ON to reveal the information or OFF to

Press (2) to resume normal teletext reception.

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

Press OK, using △+ or ▽-, select ON and press OK.

To select the desired page, enter the three digits of the page number using the number buttons.

4

User Page Bank System

programme positions.

Storing pages watch frequently

Fig. 37.

After having selected the function, you can watch a TV programme while waiting for a requested teletext page to be captured (The symbol changes colour) (see Fig. 39).

Press (a) to view the requested page.

SUBTITLES

Fig. 38.

Your teletext service will inform you if a TV programme is subtitted. After having selected the function the subtitles will be

Displaying User Pages Select MENU.

Select the desired bank with \triangle + or ∇ – (Banks A to E are available) and press OK. Select the programme position for which you have preset pages with \triangle + or ∇ - and press OK. (See Fig. 40)

Repeat steps 3 to 8 for the other 4 banks available.

Select "User Pages" with \triangle + or ∇ - and press Θ K. A table of the stored preferred pages will be displayed. (See Fig. 41)

Swiect CAS and press OK

PAGE 300 PAGE 201 PAGE 201 PAGE 500 PAGE 234

Select the desired page with \triangle + or ∇ - and press OK. The page will be displayed after some seconds.

to have quick access to the first four User pages. Page 1 corresponds to the red button, P 2 to the green one, P 3 to the yellow one and P 4 to the blue button. You can use the coloured buttons on the Remote Commander

To select the desired page press the respective coloured button while you are in TV mode. Now the Page number of this letteract page will appear in white at the top in the left-handed corner of the TV screen. When the page number changes colour, the page is available. Press the coloured button again to display the page.

Connecting and Operating Optional Equipment

Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input

Press 🕘 repe The symbol of

To go back to Press ().

Input mode

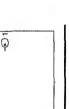
programme positions of the you can select so that you can select them with PHOGF #/- or number buttons. The details, see "Preset channels manually" on page 34.

-Ģ ۵ ه ල ඉ

Symbol









eatedly to-select the input source. The selected input source will appear. The normal TV picture	it signal	Audio/video input through the -츤 1 connector	RGB input through the —은 1 connector	Audio/video Input through the (42/-8)2 connector	S video input through the G-2/-62 connector	Audio/video input through ←3 and ←3 on the front	
the selected in the normal T	Input signal	Audio/vide	RGB input	Audio/vide	S video in	Audio/vide	

You can also select the input mode using the $P \rightarrow Q \rightarrow Q$ and A + b buttons on the TV. In this case, first select $- \bigcirc Q$, and then press - A + b buttons to select the input.

9 9

The ⊕2/-€32 connector outputs the source input from the Selecting the output other connectors.

ð

Press (> repeatedly to select the output.
The symbol of the selected output source appears. Output modes

	(→2/-€)2 connector outputs	The audio/video signal from the 🕳 1 connector	The audio/video signal from the ⊕2/®2 connector	The audio/S video signal from the ⊕2/⊸® connector	The audio/video signal from the €3, €3 connectors	The audio/S video signal from the +63, +03 connectors	The audiohides signal from the If social terminal
Output modes		The		2 ©+ The		3 @ The	
3	Symbol	-	Ф «	2	ტ ტ	က	0.24

You can use the TV Remote Commander to control most Sony remote-controlled video equipment such as; Beta, 8mm or VHS VTRs or video disc players. Equipment

Set the VTR 1/2/3 MDP selector according to the equipment you want to control: funing the Remote Commander to the equipment

VTR 1: Beta or ED Beta VTR VTR 2: 8mm VTR

VTR 3: VHS VTR

Use the buttons indicated in the illustration to operate the additional equipment. MDP: Video disc player

if your video equipment is furnished with a COMMAND MODE selector set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.







48

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen, and which output source is selected. You can also select them on the menu display.

Select »Video Connection« with \triangle + or ∇ – and press OK. The »VIDEO CONNECTION« menu appears. (See Fig. 42) You can see which source is selected for the TV and for the output. If you want to select the input and output on this menu, go on to the next step.

Select DID and press

Flg. 42.

Select TV Screen (input source for the TV screen) or output (output source) with \triangle + or ∇ - and press OK. One of the source items changes colour. (See Fig. 43)

Select the desired source with $\triangle+$ or $\nabla-$. (See Fig. 44) For details about each source, see the table on page 47.

Repeat steps 2 to 4 to select the source for other inputs or outputs. The selected source is confirmed, and the cursor appears. (See Fig. 45) Press OK.

VIDEO CONNECTION

Flg. 44.

AVZ VHS 2

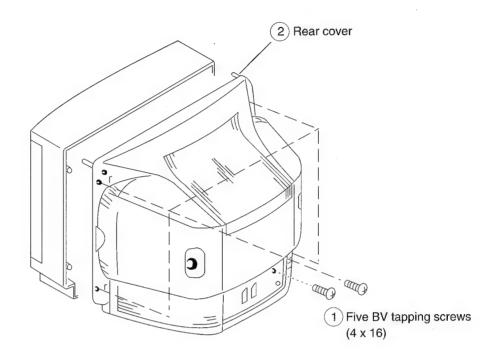
Flg. 43.

Remote Control of Other Sony

Select MM and pres

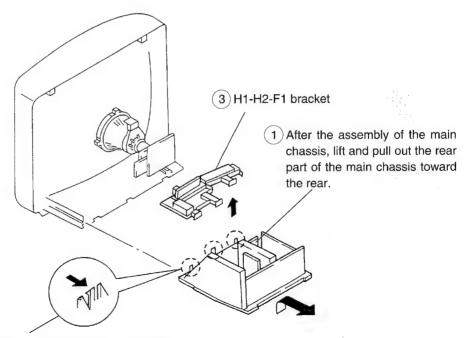
SECTION 2 DISASSEMBLY

2-1. REAR COVER REMOVAL



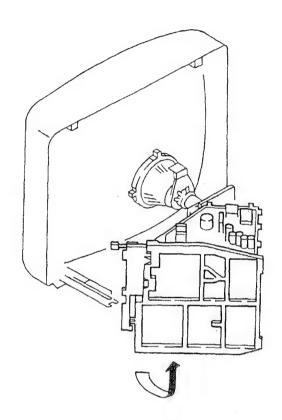
2-2. CHASSIS ASSY REMOVAL

* Remove the connector braket and then perform the following servicing. (refer to 2-3. CHASSIS ASSY REMOVAL.)

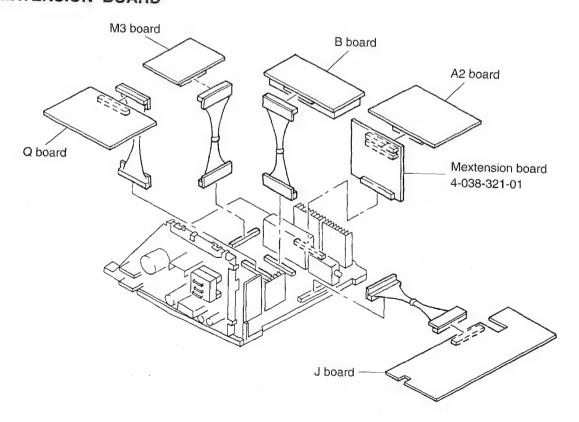


(2) Push the three claws of the main chassis in the direction of the arrow and remove the H1-H2-F bracket upwards.

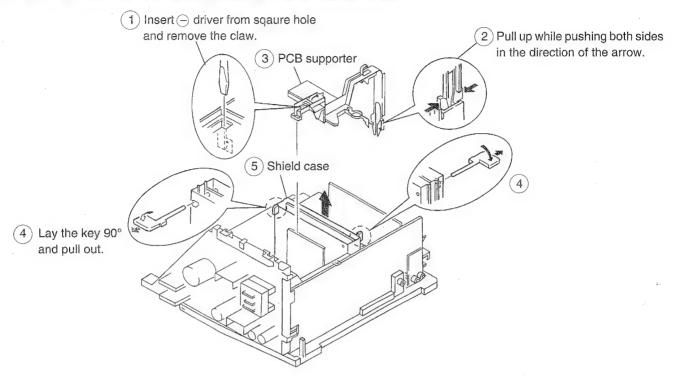
2-3. SERVICE POSITION



2-4. EXTENSION BOARD

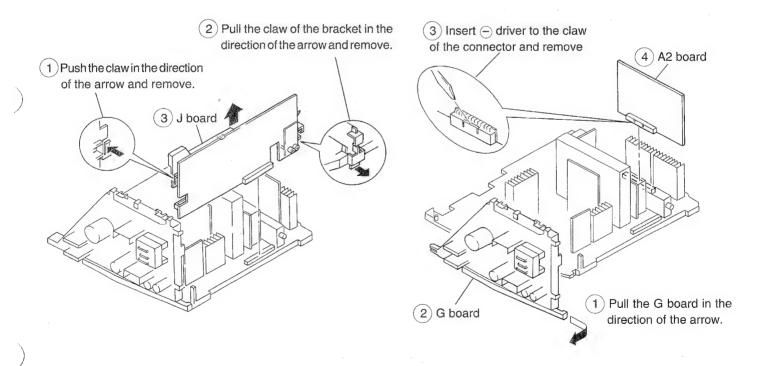


2-5. PCB SUPPORTER AND SHIELD CASE REMOVAL

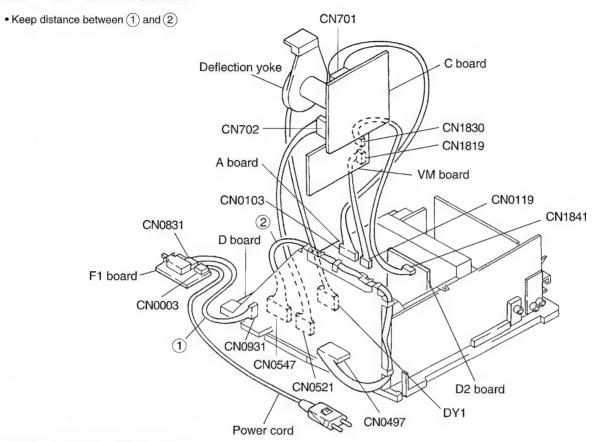


2-6. J BOARD REMOVAL

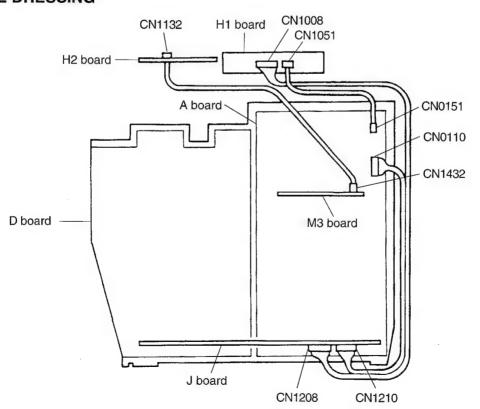
2-7. G AND A2 BOARDS REMOVAL

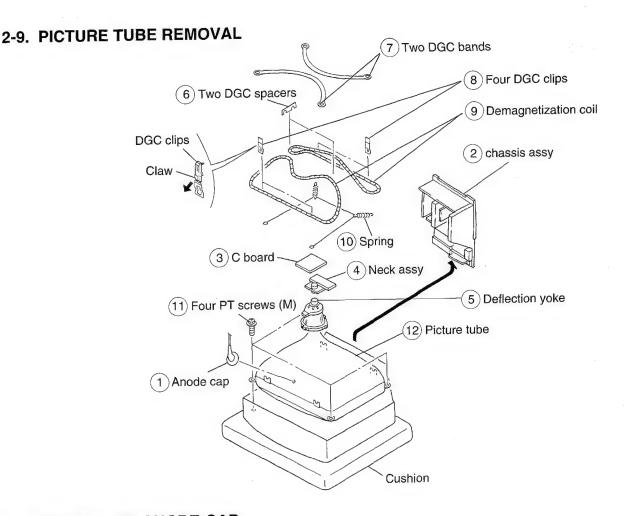


2-8-1. WIRE DRESSING



2-8-2. WIRE DRESSING

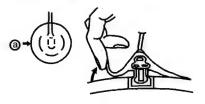


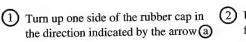


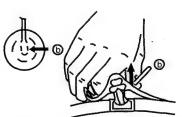
REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

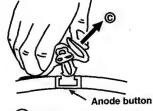
* REMOVING PROCEDURES.







Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow **b**

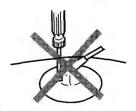


When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ©

HOW TO HANDLE AN ANODE-CAP

the rubber.

- ① Don't damage the surface of anode-cap with sharp shaped material!
- 2 Don't press the rubber hardly not to hurt inside of anode-caps! A metal fitting called as shatter-hook terminal is built into
- 3 Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or damage the rubber.





MEMO	
	the first of the second second second
· · · · · · · · · · · · · · · · · · ·	

SECTION 3 SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings:

Contrast	80%	
	(or remote	2

(or remote control normal)

☆ Brightness 50%

- Carry out the following adjustments in this order:
- 1. Beam landing
- 2. Convergence
- 3. Focus
- 4. White balance

Note: Testing equipment required.

- 1. Color bar/pattern generator
- 2. Degausser
- 3. DC power supply
- 4. Digital multimeter
- 5. Oscilloscope

Preparation:

- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

- Input the white signal with the pattern generator.
 CONTRAST BRIGHTNESS normal
- 2. Position neck assy as shown in Fig.3-2.
- 3. Set the pattern generator raster signal to red.
- 4. Move the deflection yoke forward and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 3-3)
- 5. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
- 6. Switch the raster signal to blue, then to green and verify the condition.
- 7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
- 8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

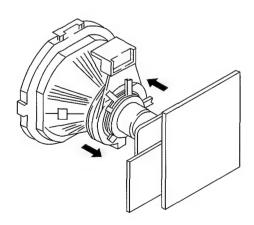
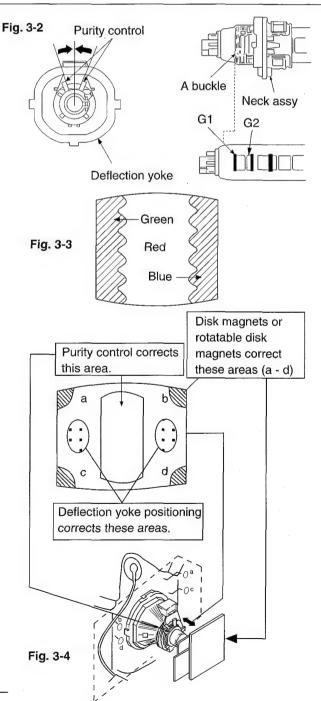


Fig. 3-1

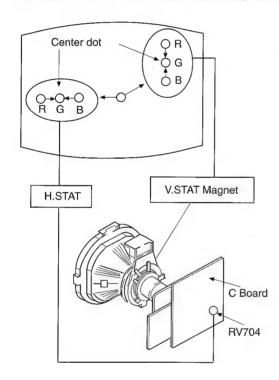


3-2. CONVERGENCE

Preparation:

- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

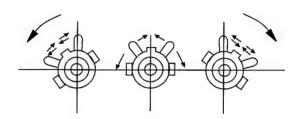
(1) Horizontal and vertical static convergence



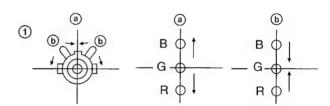
- 1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
- 2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
- 3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.

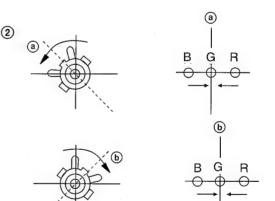
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

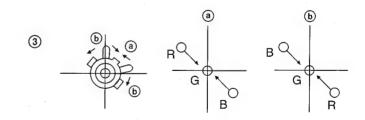
• Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



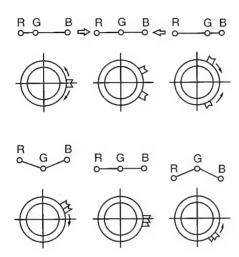
4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.





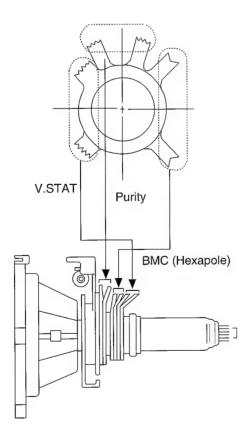


Operation of BMC (Hexapole) Magnet



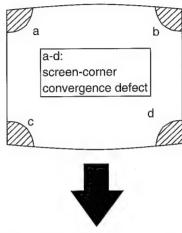
 The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.

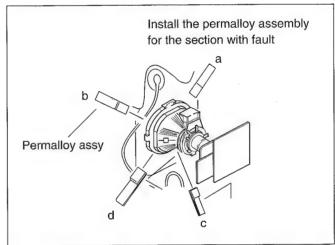
Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of the screen (by moving the dots in the horizontal direction).



(2) Screen corner convergence.

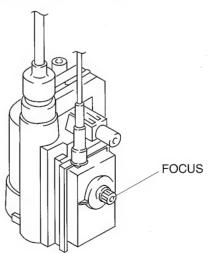
If you are unable to adjust the corner convergence properly, correction is possible by the use of permalloy assemblies.





3-3. Focus

Adjust the focus to optimize the screen.



3-4. WHITE BALANCE

White balance adjustment

- 1. Receive an all-white signal.
- 2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" on how to enter service mode.)
- 3. Select TDA4780 on menu.

item No.	Adjustment item	Data Amount
01	BRIGHT	31
02	COLOR	31
03	PICT	52
04	HUE	31
05	R GAIN	31
06	G GAIN	ADJ.
07	B GAIN	ADJ.
08	R LEVEL REF	ADJ.
09	G LEVEL REF	ADJ.
10	B LEVEL REF	ADJ.
11	PEAK DRV LIMIT	36
12	GAMMA	31
13	SANDCASTLE 2 LEVEL-5	ON
14	DELOF	OFF
15	DATA BUFFER	OFF

Select 4 \$ and press OK.

- 4. Set picture to MAX.
- 5. Adjust G-DRIVE, B-DRIVE with ★, ★ buttons so that the white balance becomes optimum.
- 6. Press OK button to write the data for each item.
- 7. Set picture to MIN.
- 8. Adjust R LEVEL REF, G LEVEL REF, and B LEVEL REF with ★, verbuttons so that the white balance becomes optimum.
- 9. Press OK button to write the data for each item.

SECTION 4 CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-831.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set. Then press the button \bigcirc on the remote commander twice.

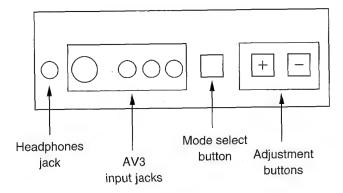
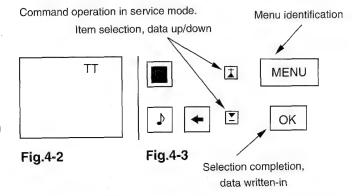


Fig.4-1

2. "TT" will appear at the upper right corner of the screen.



3. Press the MENU button on the remote commander to obtain the menu on the screen.

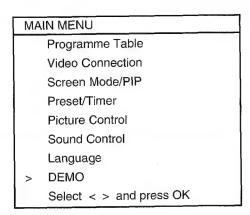


Fig.4-4

- 4. Press the

 and

 buttons on the remote commander and move > to DEMO.
- 5. Press OK button to proceed to the next menu.
- 6. The menu of Fig. 4-5 will appear on the screen. Select the DEVICE corresponding to the adjustment item from the table on the next page.

DEVI	CES
	INIT TV
>	TDA4686/4780
l	ECO 3
	CXD2018Q
ļ	TDA9145
	CXA1526
	TDA6812
	CXA7948a
	PiP
	Select < > and press OK

Fig 4-5

7. If adjustment item is TDA4780, press the ▼ button and move > to TDA4780.

TDA4780

Item No.	Adjustment item	Data Amount
> 01	BRIGHT	31
02	COLOR	31
03	PICT	52
04	HUE	31
05	R GAIN	41
06	G GAIN	38
07	B GAIN	31
08	R LEVEL REF	31
09	G LEVEL REF	31
10	B LEVEL REF	. 31
11	PEAK DRV LIMIT	36
12	GAMMA	31
13	SANDCASTLE 2 LEVEL-5	ON
14	DELOF	OFF
15	DATA BUFFER	OFF

Select ▲ ▼ and press OK.

- 8. Press OK button to get the next selection menu.
- 9. Press button and move > to the adjustment item and press OK button.
- 11. Press OK button to write data.
- 12. Turn off the power to quit service mode when adjustments are completed.

TDA4780

Item No.	Adjustment item	Data Amount
01	BRIGHT	31
02	COLOR .	31
03	PICT	52
04	HUE	31
05	R GAIN	41
06	G GAIN	38
07	B GAIN	31
08	R LEVEL REF	31
09	G LEVEL REF	31
10	B LEVEL REF	31
11	PEAK DRV LIMIT	36
12	GAMMA	31
13	SANDCASTLE 2 LEVEL-5	OΝ
14	DELOF	OFF
15	DATA BUFFER	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DISABLE	OFF
21	FSW 2	OFF
22	FSW 1 DISABLE	OFF
23	FSW 1	OFF
24	ADAPTIVE BLACK	OFF
25	Y HIGH 1V	OFF
26	MOD 2	OFF
27	BLUE STRETCH	OFF
28	VM OUT	ON
29	PEAK DRV ABSOLUTE	ON
30	TIME CNST PEAK LIMIT	OFF
31	No selection	OFF
32	SUB BRIGHT	-5
33	SUB COLOR	0

CXD2018Q

Item No.	Adjustment item	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	13
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	INTERLACE	ON
20	H SHIFT	32

Typical On Screen Display based values when receiving PAL Phillips pattern.

TDA6812	ADJ.
Stereo-Separation	(30)

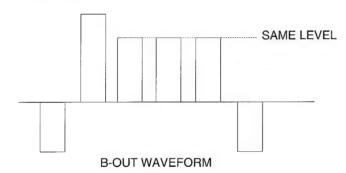
Should be adjusted twice 4:3 and 16:9 mode.

SUB BRIGHTNESS ADJUSTMENT

- 1. Input a Phillips pattern.
- 2. Enter into service mode and press 23.
- Adjust data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.

SUB COLOR ADJUSTMENT

- 1. Input a PAL color bar signal.
- 2. Connect an oscilloscope to pin 3 (B) of CN0403 on the C board.
- 3. Enter into service mode and press 33 of TDA4780, SUB COLOR.
- 4. Adjust data so that the right sides of the waveform are at the same level.



STEREO-SEPARATION ADJUSTMENT

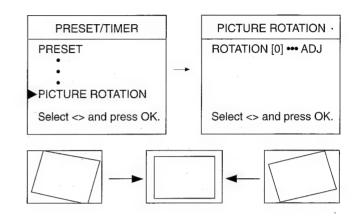
- 1. Input a 1kHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
- 2. Enter into service mode.
- 3. Adjust data so that sound is not detected in the R-ch and the L-ch.

DRIVE AND CUT OFF

See direct test mode list attached and refer to sub brightness or such for adjustment method.

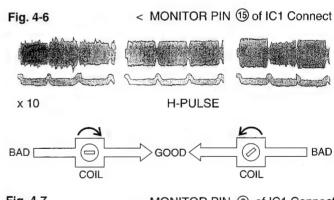
PICTURE ROTATION

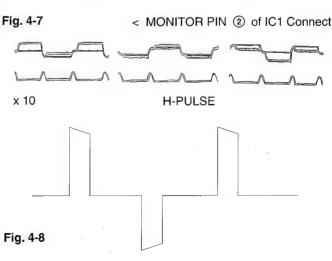
- 1. Input a PAL color bar signal.
- 2. Enter into service mode.
- 3. Press the MENU button of the commander to get the menu on screen.



BELL FILTER ADJUSTMENT (L3, L2)

- 1. Input PHILLIPS Signal.
- 2. Connect an oscilloscope to pin (5) of IC1 on the E2 board.
- 3. Adjust L3 (Bell Filter) to get a flat chroma/smooth signal see (Fig.4-6).
- 4. Connect an oscilloscope to pin ② of IC1 on the E2 board.
- 5. Adjust L2 (B Y) to get symmetrical transient between $(R Y) \longrightarrow (B Y)$ and $(B Y) \longrightarrow (R Y)$ see (Fig.4-7).
- 6. Connect pin (5) of CN2.
- 7. Confirm ID flip-flop output signal is as indicated in (Fig.4-8).

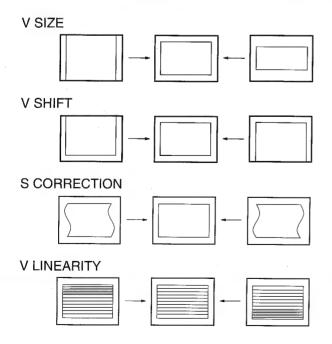


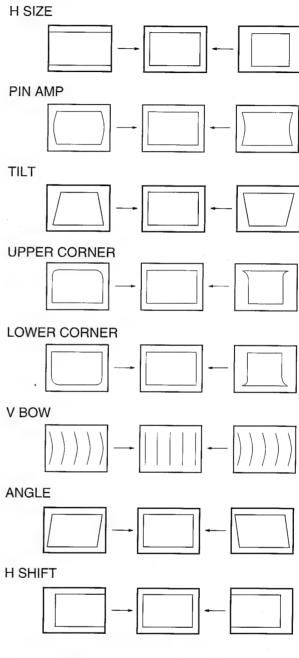


DEFLECTION SYSTEM ADJUSTMENT

- 1. Enter into service mode and select CXD2018Q.
- 2. Select and adjust each item in order to obtain the optimum image.

Item No.	Adjustment item	Data Amount
01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP. V	13
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	ADJ.
21	NS CORRECT 2R	ADJ.



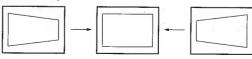


3. Press OK button to write data.

If the menu display prevents accurate adjustment, press \propto to clear, to resume, press \propto once again.

N/S CORRECT (RV1501)

(Adjust RV1501)

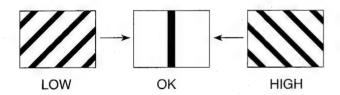


4-2. VOLUME ELECTRICAL ADJUSTMENTS

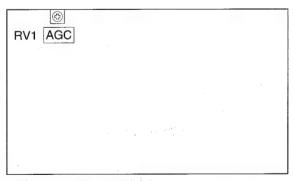
H-FREQ ADJUSTMENT (RV2501)

D BOARD (See page 28)

- 1. Input a Phillips pattern.
- 2. Add a 100μF 16V capacitor in parallel with R2503, to make a free running condition.
- 3. Adjust RV2501 to obtain frequency of 31.25Hz ± 50 Hz.

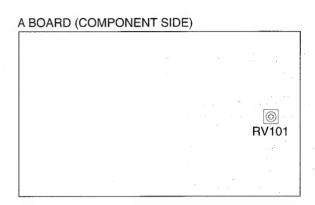


AGC ADJUSTMENT (IF BLOCK)



- 1. Receive an off-air signal.
- 2. Adjust the AGC RV1 so that there is no snow noise or cross-modulation visible on the screen.
- 3. Change the receiving channel and confirm status.

DET OUT ADJUSTMENT (RV101)



- 1. Input a Phillips pattern
- 2. Adjust RV101 so that 1.0Vp-p can be obtained at pin ⑤ of CN0109 on the (A BOARD).

4-3. TEST MODE 2:

Is available by pressing Test button twice, OSD "TT" appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0, 10, or 20 twice ... or switch the TV into Stand-by Mode.

Pressing the two local controls (+ and -) during Power ON will also switch into "TT" mode.

In TT mode, it is possible to remove the menu from the screen by pressing the Speaker OFF button. By pressing the Speaker OFF button a second time the menu will reappear. The function is kept even when the menu is not displayed !!.

00	Switch TV back in nomal mode - TT mode off		
01	Direct access to Picture maximum		
02	Direct access to Picture minimum		
03	Set the Volume to 35% (Production request)		
04	Set the Volume to 50% (Production request)		
05	Set the Volume to 65% (Production request)		
-06	Set the Volume to 80% (Production request)		
07	no function		
08	Shipping Condition (Production request) To ensure that all TV sets leave the Production with the same presettings. Programme 1 is selected, AAV IN is set to AV1, AV Out is set to TV Out, Volume and HP Volume is set to 35%. Resolution is set to high. Format is set to 4:3. Pip is set to Top Left position,. Pip is switched off. TT mode is switched off, all analogue values are set to the reset setting (factory setting).		
09	Language reset (Production request) With this function the "Language Byte" in the NVM (Bank 0AAH Adress 0DCH) is erased (set to 0FFH). The Language Menu appears now automatically when the TV set is switched ON as long as no new language is selected.		
10	The TT number will be deleted. All numbers with 0 (10, 20, 30, 40) will reset the TT number. A new number can be selected. TT display is kept.		
11	Direct access to Balance (Production request) With Cursor Up/Down the Balance can be controlled (w/o OSD, Menu display).		
12	Direct access to Hue (Production request) With Cursor Up/Down the Balance can be controlled (w/o OSD, Menu display).		
13	Display of Software Version and TV set configeration.		
14	Adjustment of N/S Correction		

	Read Factory setting from ROM (Programme Code) and store this data at Last Power Memory data location. (The previous last power memory data is overwritten). (For Service). AE-2F has 3 packages of Analogue datas:		
15	Last Power Memory dta. This data is send continiously to the corresponding IC's (TDA9145, TDA6812) with this data the TV picture/sound appears.		
	2. Reset data. By pressing "Reset" in menu this data is transfered from Reset Data location to the Last Power data location in NVM. That means the previous Last Power Memory Data is overwritten by the Reset data. Last Power memory and Reset data are now the same.		
	 Factory fixed data. In the ROM Code of micro processor are also analogue datas which are fixed (ROM can't be changed). 		
16	Save actual Last Power Memory data at Reset Data location (the previous Reset data is overwritten) (For Service)		
15/16	With these two functions, it is possible to preset user defined Reset values (just TT 16) or to preset factory defined Reset values (first TT 15 then TT 16).		
17	This function presets the Labels for the AV sources: The Labels are AV1, RGB, AV2, YC2, AV3, VC3, AV4 and VC4. (Production request)		
18	Text possible On/Off selection of Text (toggle function).		
19	Direct access to Stereo Separation. With Cursor Up/Down command the Separation can be adjusted. (no need to select the menu).		

20	see TT10 In case of TT functions which give the possibility of "Direct access", the adjsutment can be done with Cursor Up/Down commands. After releasing the selected TT function by TT 00 or other TT number the adjustment value is stored automatically.		
21	no function		
22	no function		
23	no function		
24	no function		
25	no function		
26	Text Character Char set 06 -> West Europe (see 9.24 Test Character Set)		
27	Text Character Char set 38 -> East Europe (see 9.24 Test Character Set)		
28	Text Character Char set 40 -> West Europe US English (see 9.24 Test Character Set)		
29	Text Character Char set 55 -> West Europe Turkish (see 9.24 Test Character Set)		
30	see TT10		
31	Direct access to Red Gain [TDA4780]		
32	Direct access to Green Gain [TDA4780]		
33	Direct access to Blue Gain [TDA4780]		
34	Reserved for TDA4780 Red Level Ref.		
35	Reserved for TDA4780 Green Level Ref.		
36	Reserved for TDA4780 Blue Level Ref.		
37	Direct access to Peak Dirve Limit [TDA4780]		
38	Direct access to Gamma Level [TDA4780]		
39	no function		
40	see TT 10		
41	TDA4780 is set to default data (almost Center positions).		
42	TDA4780 is set to default data (almost Center positions).		
43	TDA4780 is set to default data (almost Center positions).		
44	ECO 2 is set to default data.		
45	Set NVM to Protect mode (Bank 0AEH Adr. 0FFH write with 0).		

	IR CHannel Pressetting Mode The channel pressetting can be done by a Special IR Transmitter		
46	Sequence: TT 46 -> PR Number select display appears Select Prog. No from where the channels shall be stored> Now TV is waiting for IR sequence		
	! Note: when TT 46 is active, any IR transmission will be interpreted as PROG Data!		
47	Adjustment of MPIP MultiPIP horizontal position.		
48	Adjsutment of MPIP MultiPIP vertical position. After using TT 49 a complete new adjustment is necessary!!!		
49	The EEPROM Testbyte is erased. After Power OFF -> ON the complete EEPROM data (except channel tables) are overwritten. EEPROM Protection Byte is set to 0 - protection mode.		

Note:

For No. 35 / 36 / 37 / 38 special pressing (AKB, forced Color Mode, Trap) is selected.

After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched On and TDA9145 is switched to Auto Search Mode.

Note

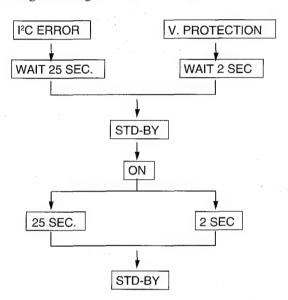
Functions TT 41/42/43/44 are only available when PR 99 is selected, to avoid inadvertent usage. These functions overwrite the complete data package for the selected IC in the EEPROM. After using one of these functions a complete new adjustment of the selected IC is necessary!!!!!

In Test Mode 2 the Menu display is switchable by the Speaker-Off button.

4-4. ERROR MESSAGE

Self diagnostic system operates as follows.

 When the microprocessor is unable to receive an acknowledgement back from the device, the LED starts flashing according to the table below.



In the case of more than one error in parallel, the blinking error shows max priority according to the error number (e.g. error 2 and error 5 appear together, then LED,s show error 2).

ERROR TABLE

ERROR COUNT	IC TYPE	FUNCTION
1	II C BUS	SDA low
2	NVM	EEPROM
3	SDA3202	Tuner PII
4	TDA9145	Colour decoder
5	TDA4780	RGB/Jungle
6	TDA6812	Sound processor
7	CXD2018Q	V deflection
8	CXA1855S	AV switch
11	SDA5273P	Text
13		V protection

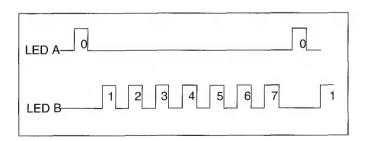
Stand By LED blinking

No 1K return

4-5. ERROR I²C BUS DIAGNOSTIC SYSTEM FOR AE-2F CHASSIS.

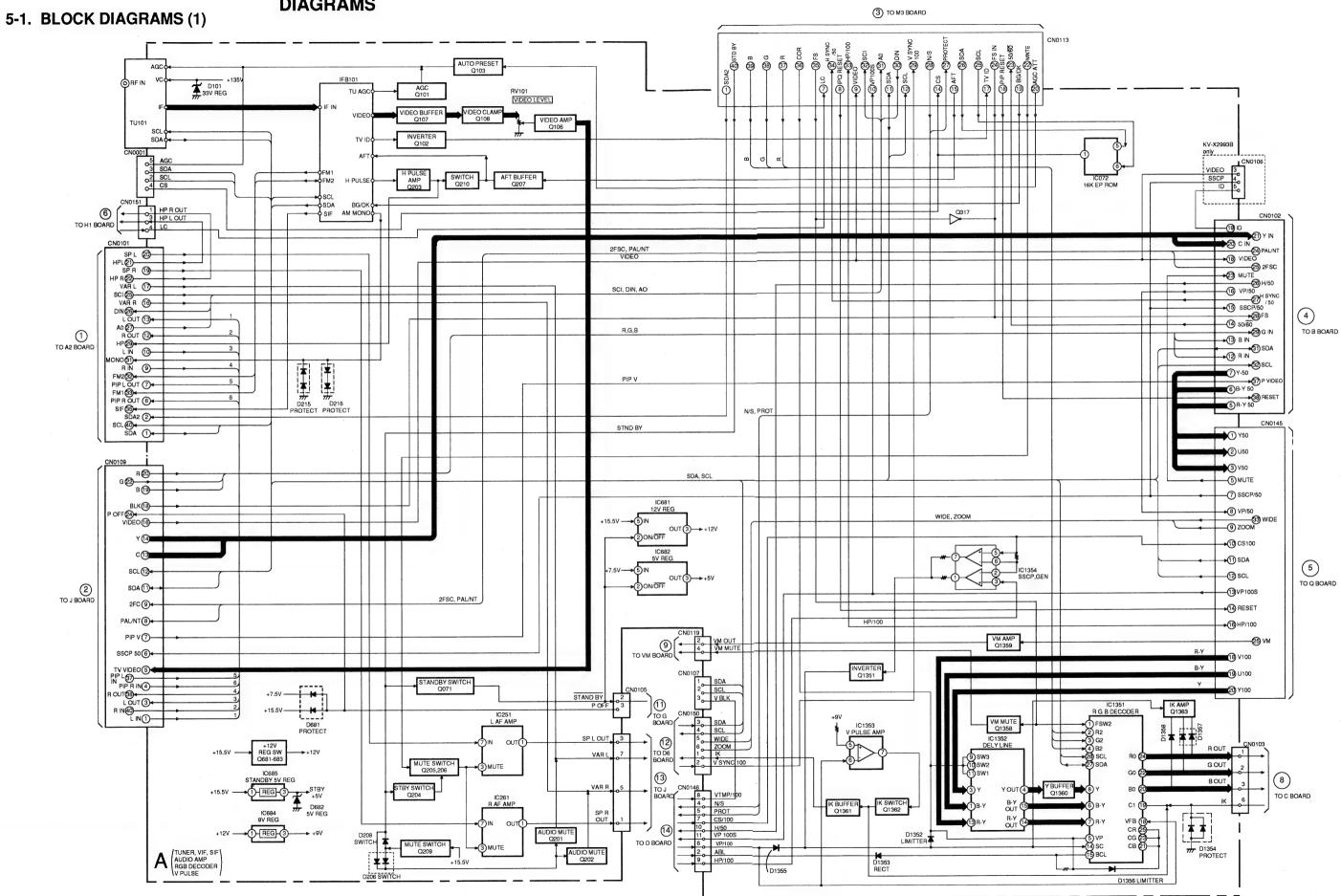
For all IC's used in the AE -2F chassis which are necessary to obtain picture and sound there is an inbuilt I $\rm C^2$ Bus diagnostic system.

In the case of no acknowledge bit, LED A and LED B start blinking as shown.

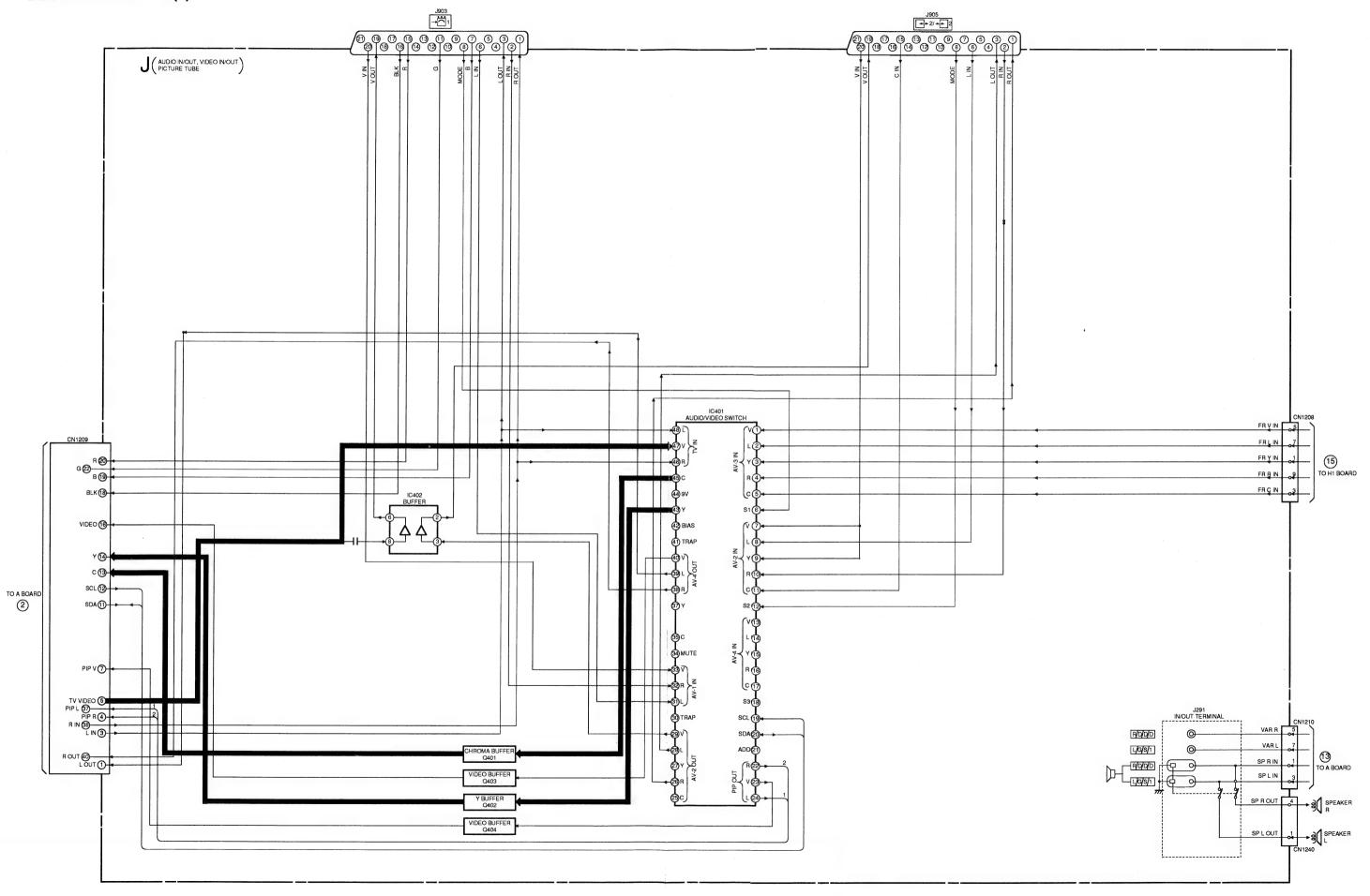


SECTION 5 DIAGRAMS

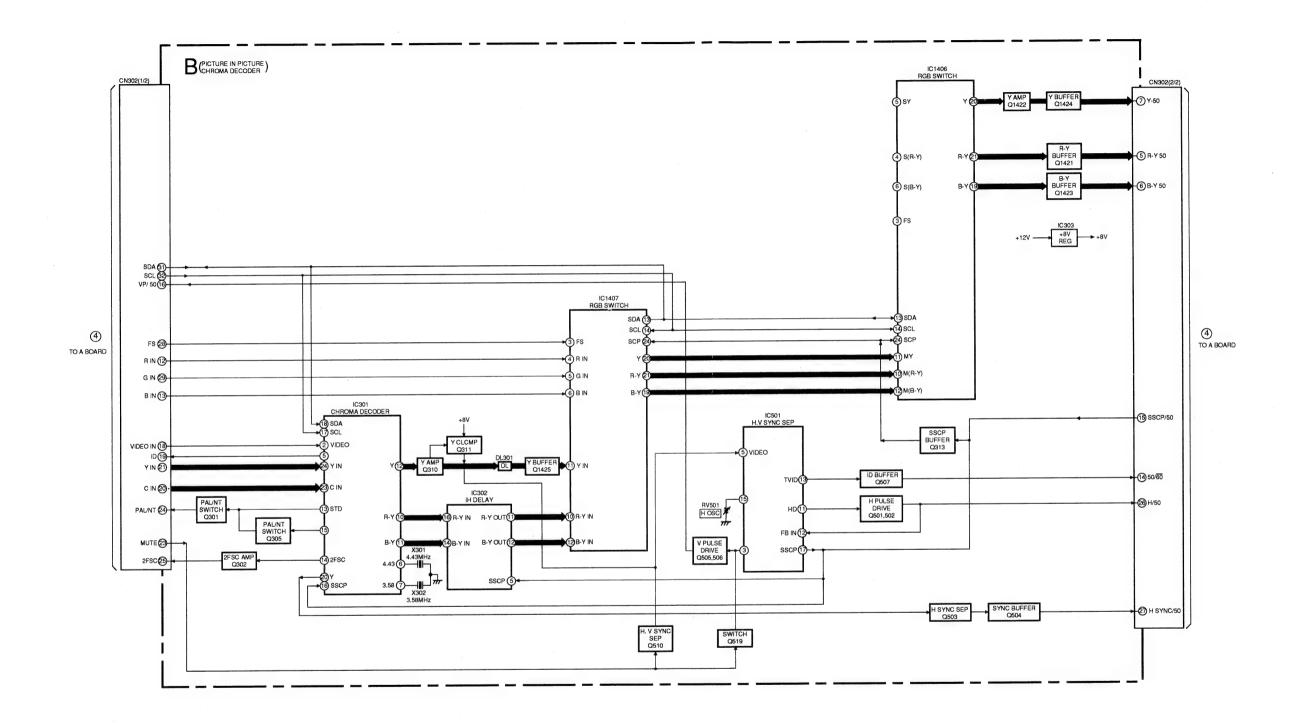




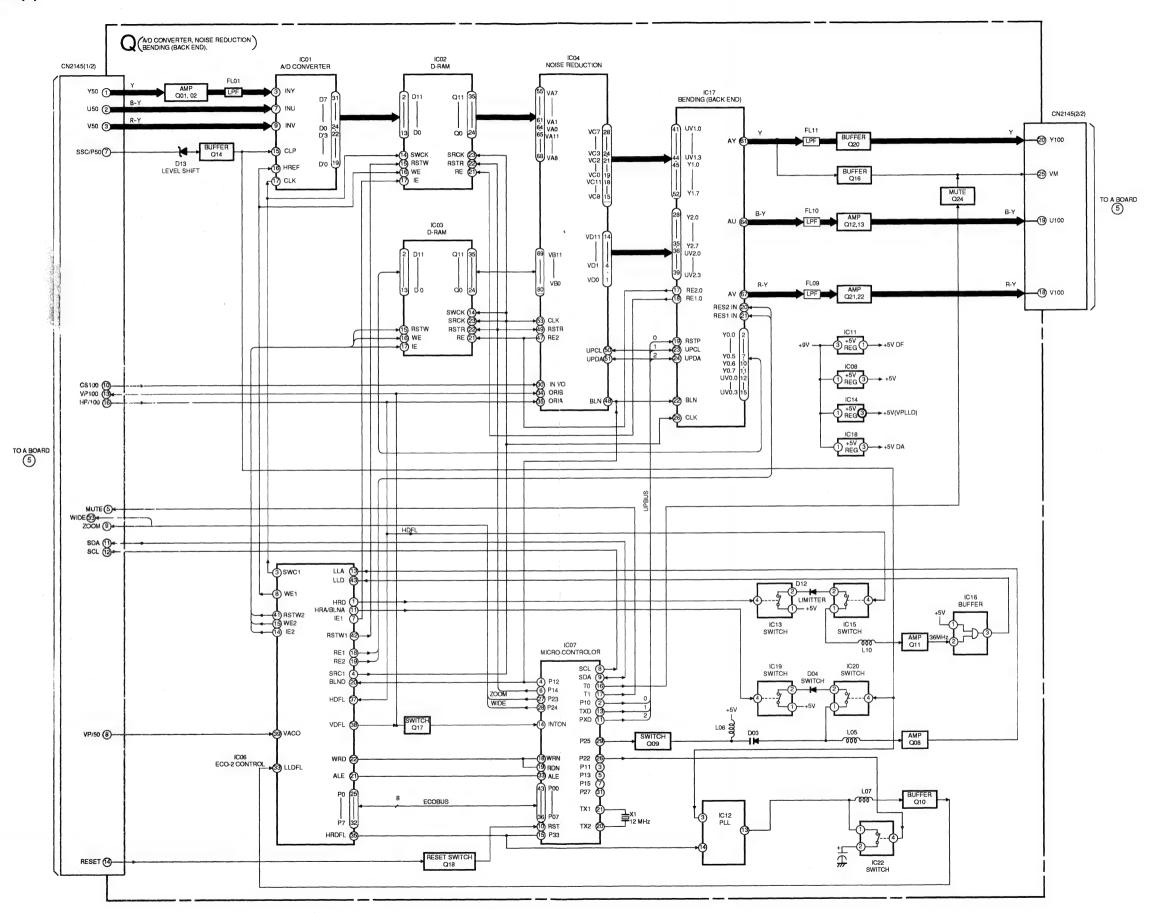
BLOCK DIAGRAMS (2)



BLOCK DIAGRAMS (3)

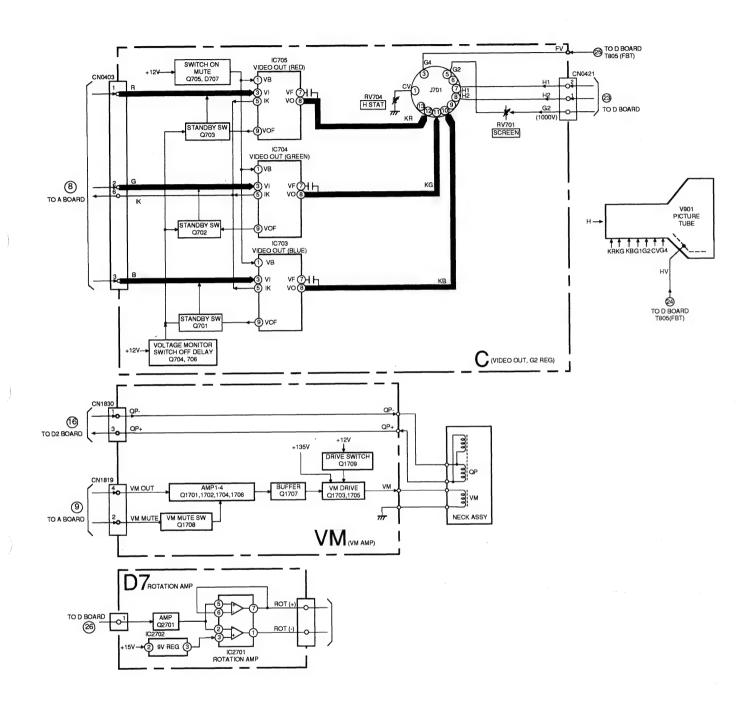


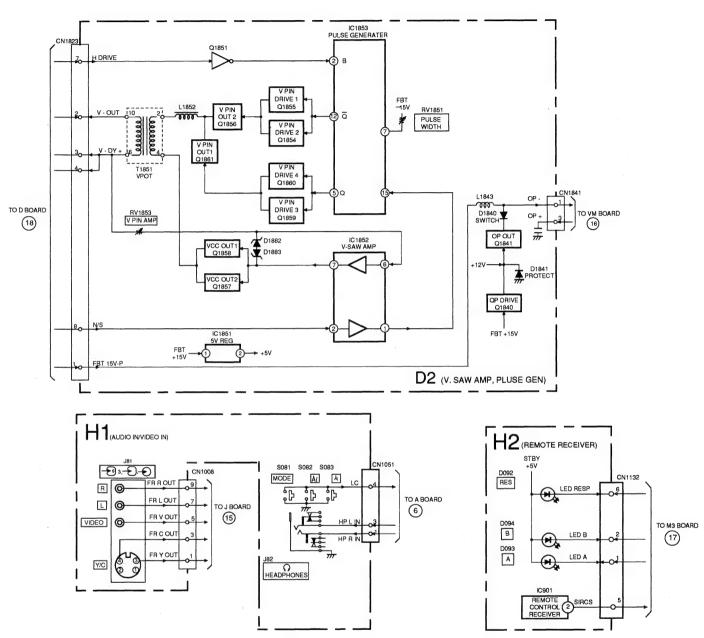
BLOCK DIAGRAMS (4)



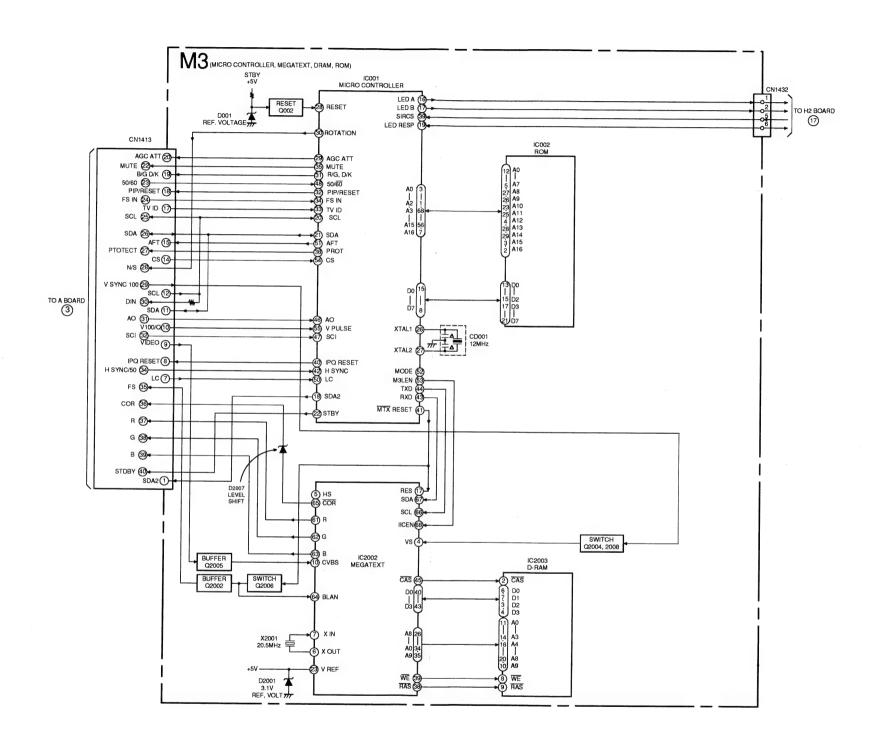
BLOCK DIAGRAMS (5)

BLOCK DIAGRAMS (6)

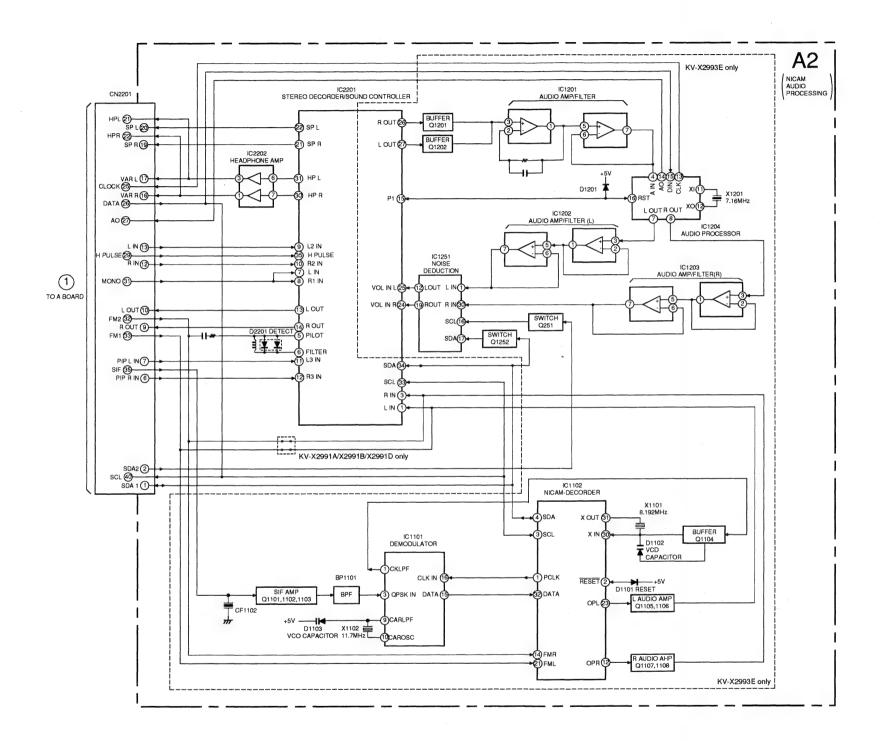




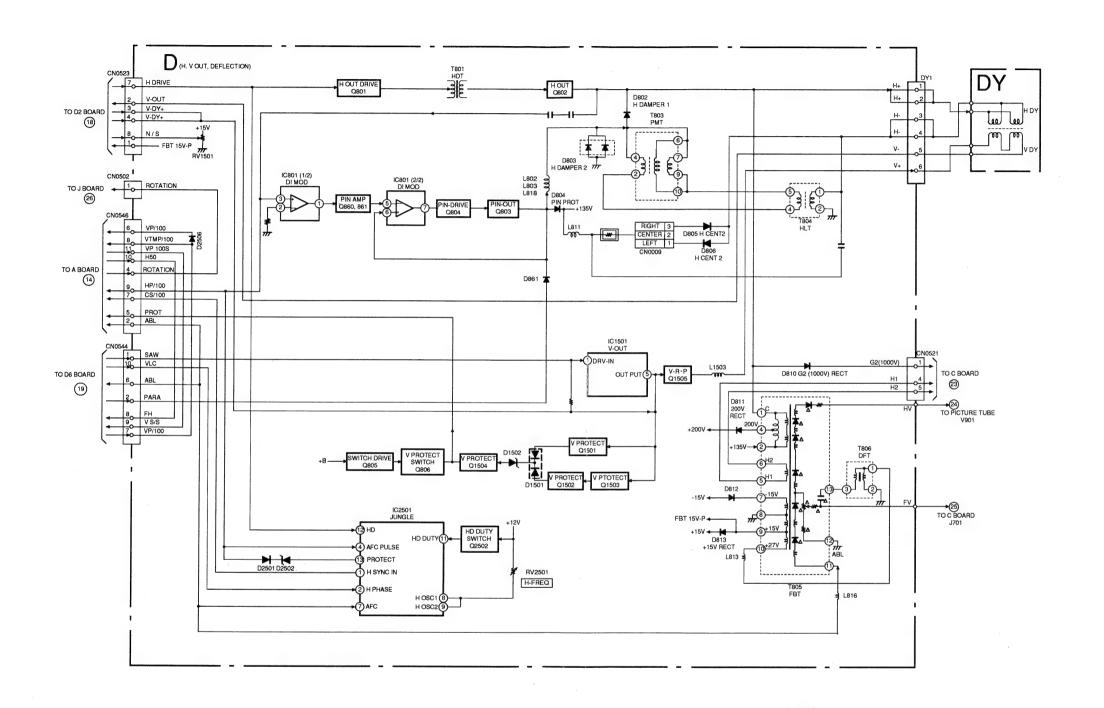
BLOCK DIAGRAMS (7)



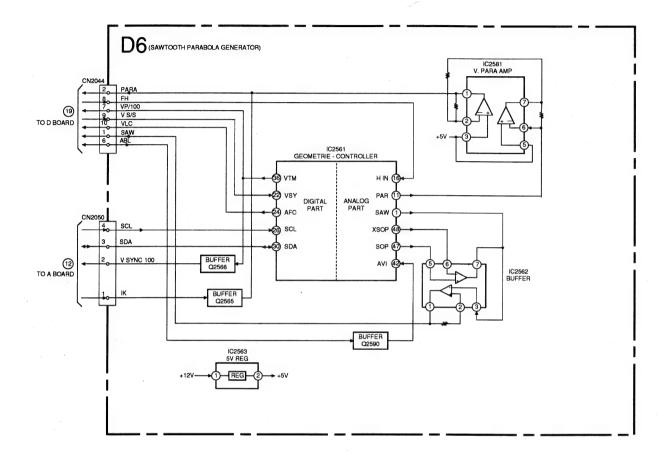
BLOCK DIAGRAMS (8)



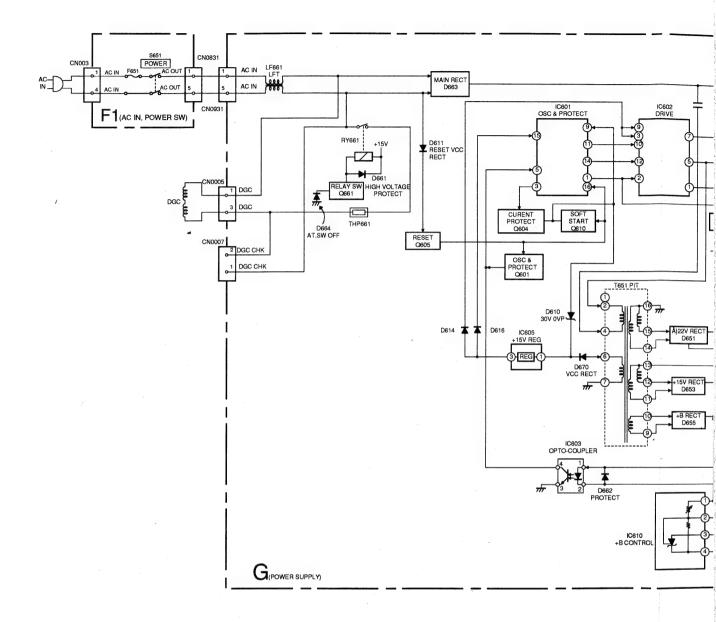
BLOCK DIAGRAMS (9)

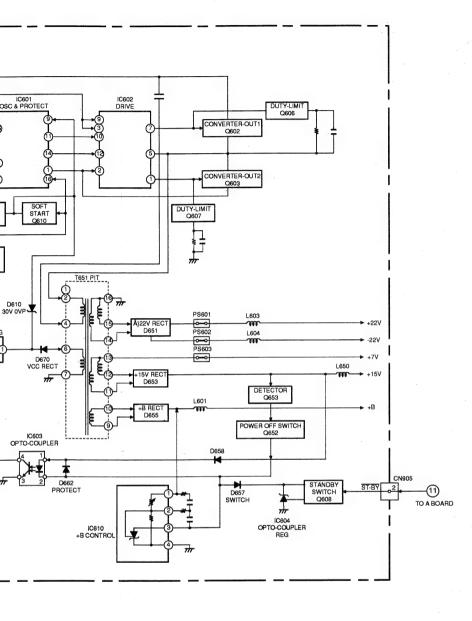


BLOCK DIAGRAMS (10)

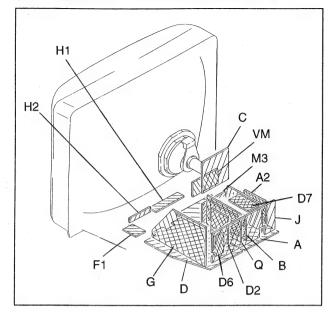


BLOCK DIAGRAMS (11)





5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

- All capacitors are in μF unless otherwise noted.
- pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.
- · All electrolytics are in 50V unless otherwise specified.
- · Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch: 5 mm Rating electrical power 1/4W

- · Chips resistors are 1/10W.
- · All resistors are in ohms.
- $k\Omega = 1000\Omega$, $M\Omega = 1000K\Omega$
- : nonflammable resistor.
- : fusible resistor.
- A: internal component.
- : panel designation, and adjustment for repair.
- · All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ___ : earth-ground. (cool)
- + : earth-chassis. (hot)
- · All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 $\mbox{M}\Omega$ digital multimeter.
- · Readings are taken with a PALcolour-bar signal input.
- · Voltage variations may be noted due to normal production tolerance.
- · Circled numbers are waveform references.
- : B+ line.
- □ : B- line.
- signal path.

Reference information

RESISTOR : RN METAL FILM :RC SOLID : FPRD NONFLAMMABLE CARBON NONFLAMMABLE FUSIBLE NONFLAMMABLE WIREWOUND : RS NONFLAMMABLE METAL OXIDE : RB NONFLAMMABLE CEMENT ADJUSTMENT RESISTOR COIL : LF-8L MICRO INDUCTOR CAPACITOR : TA TANTALUM

STYROL

: PP POLYPROPYLENE

:PT MYLAR : MPS METALIZED POLYESTER

: MPP METALIZED POLYPROPYLENE : ALB BIPOLAR

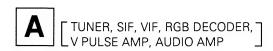
HIGH TEMPERATURE

: ALR HIGH RIPPLE

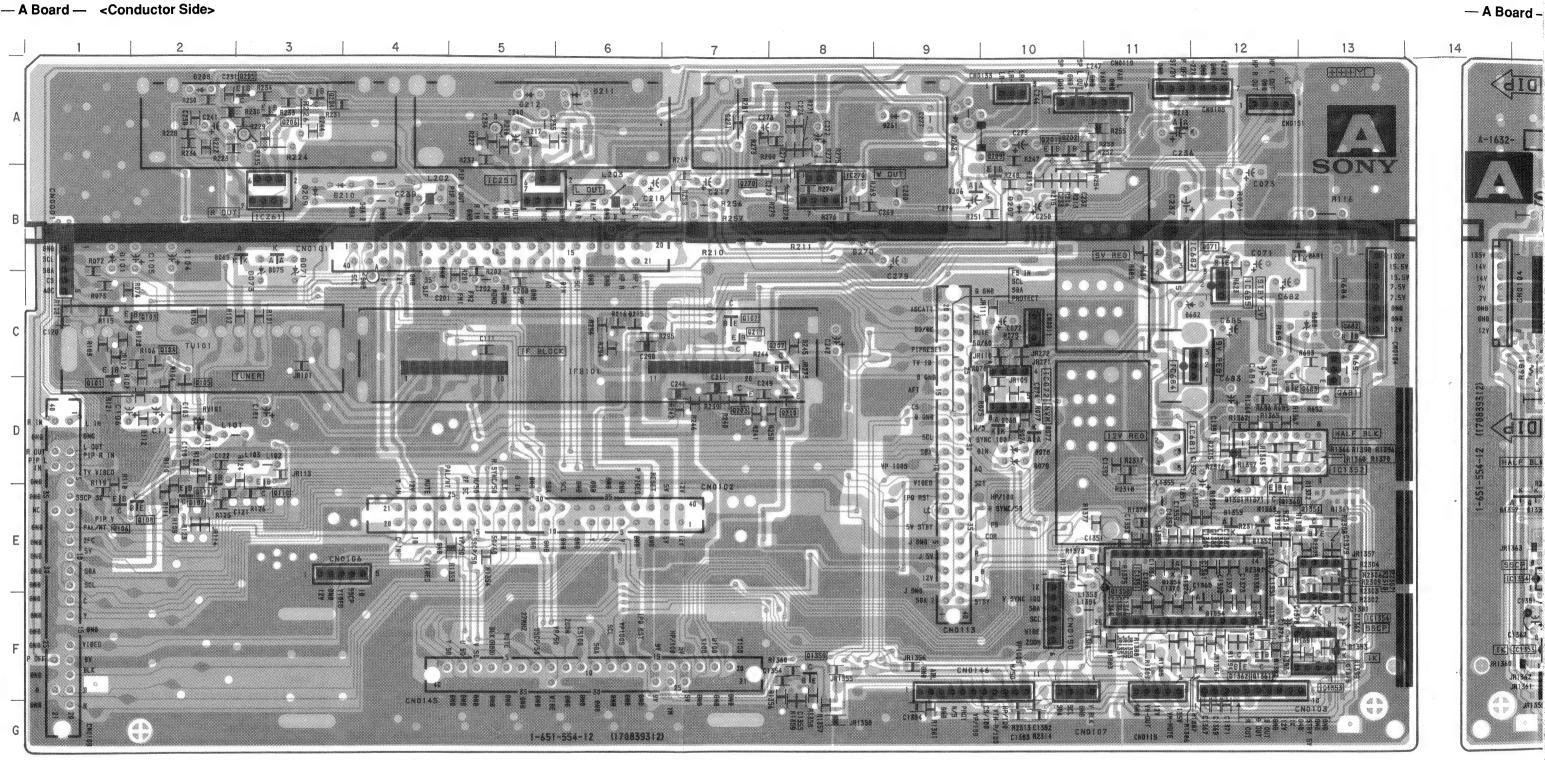
Components identified by shading and marked Λ are critical for safety. Replace only with the part

number specified.

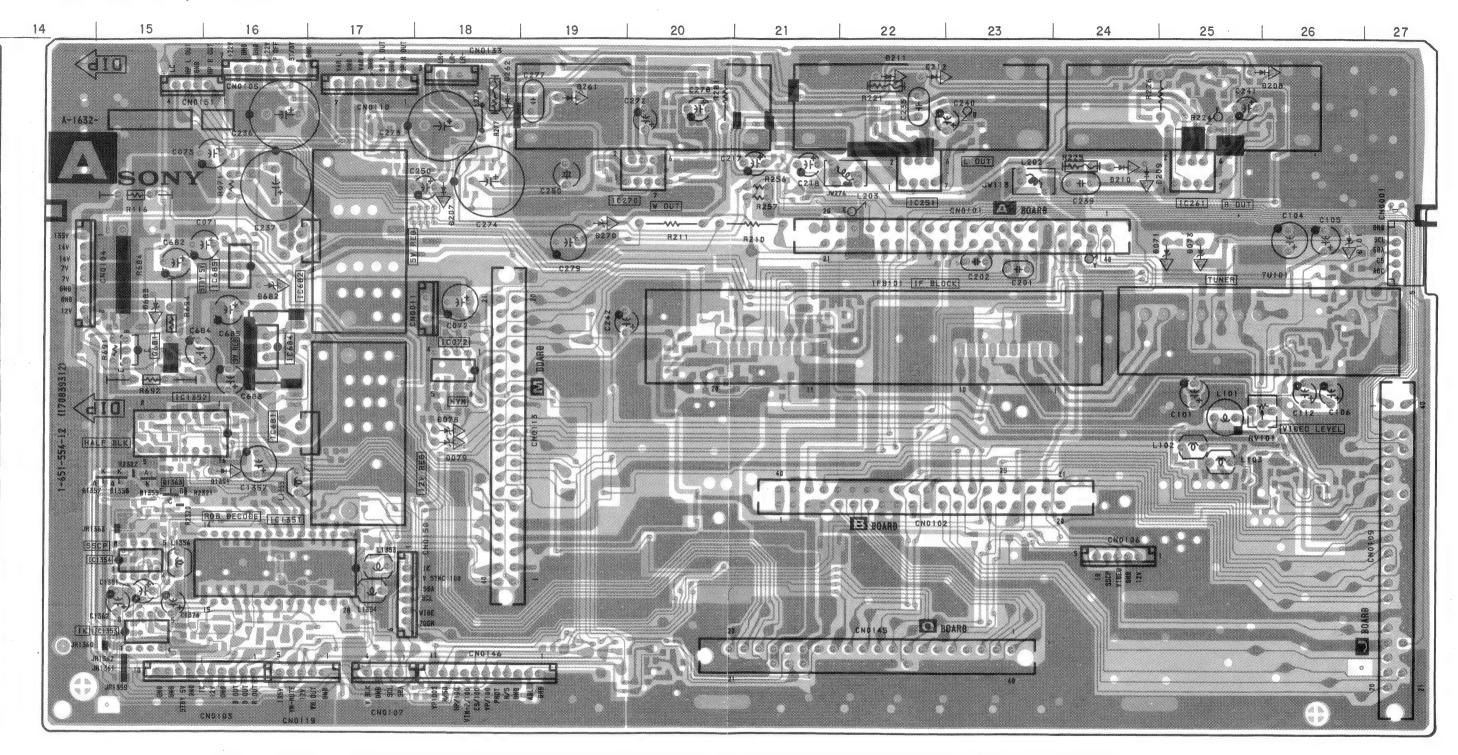
Les composants identifies par une trame et une marque A sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



— A Board — < Conductor Side>

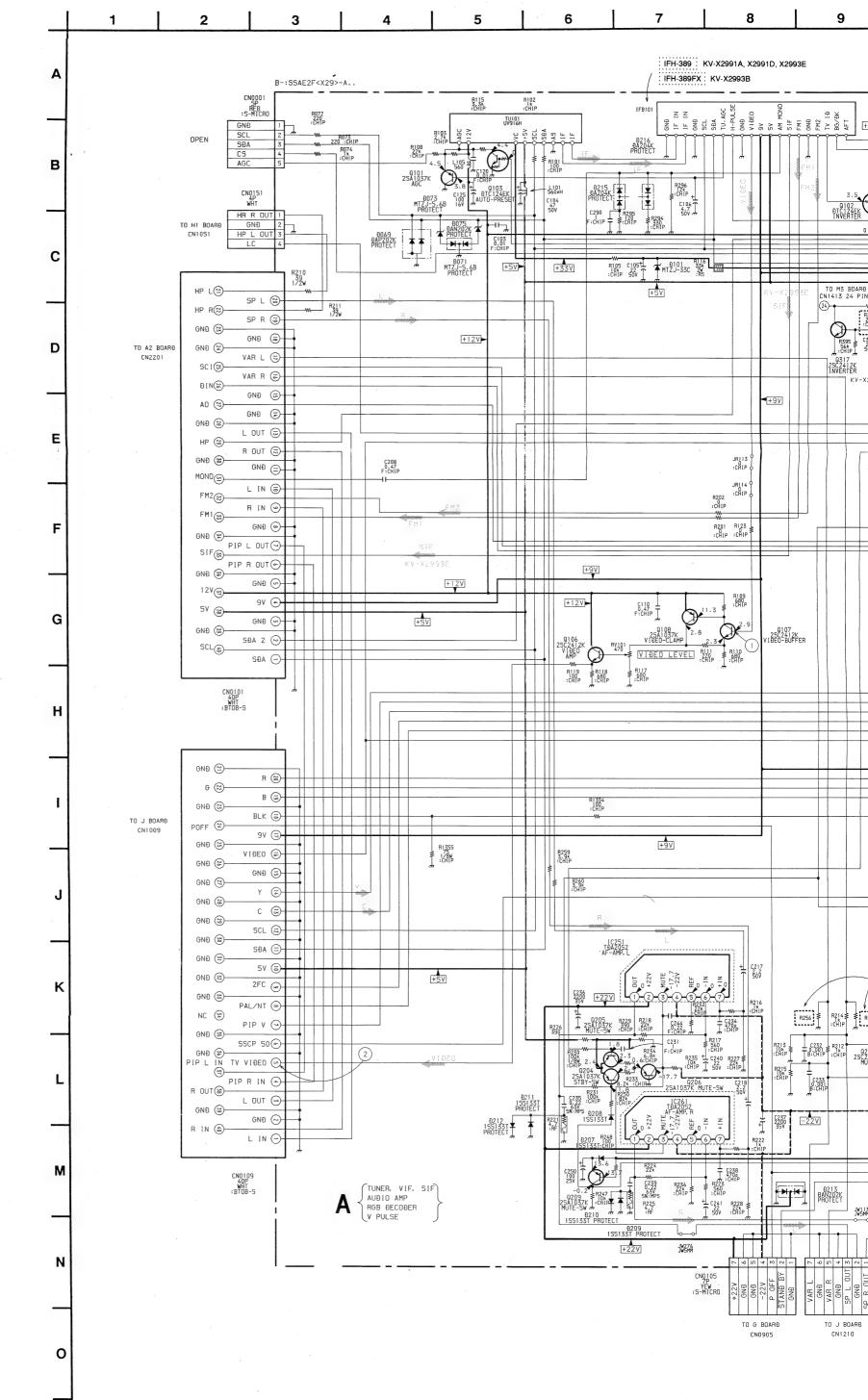


— A Board — < Component Side>



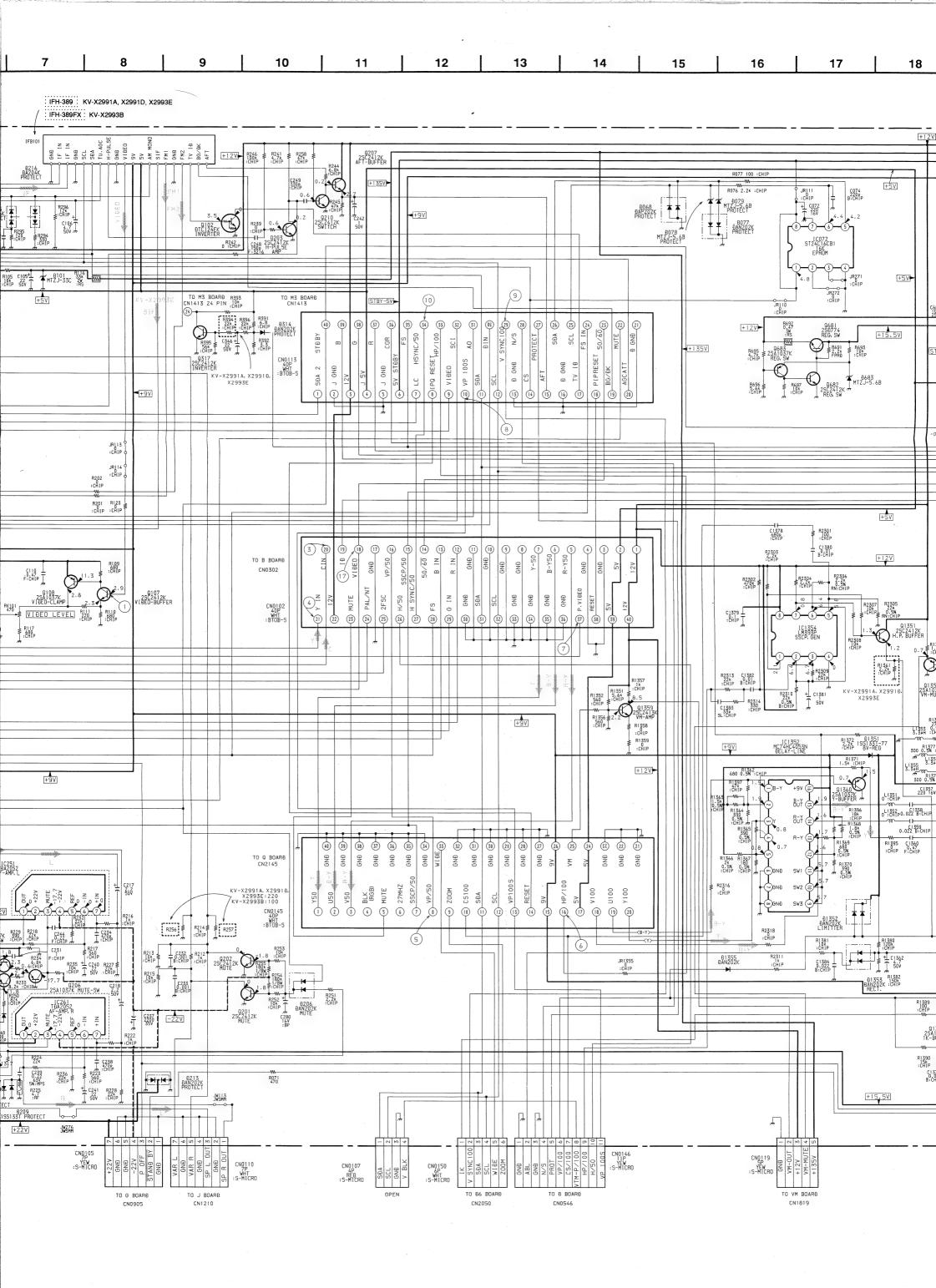
[•] Pattern from the side which enables seeing.

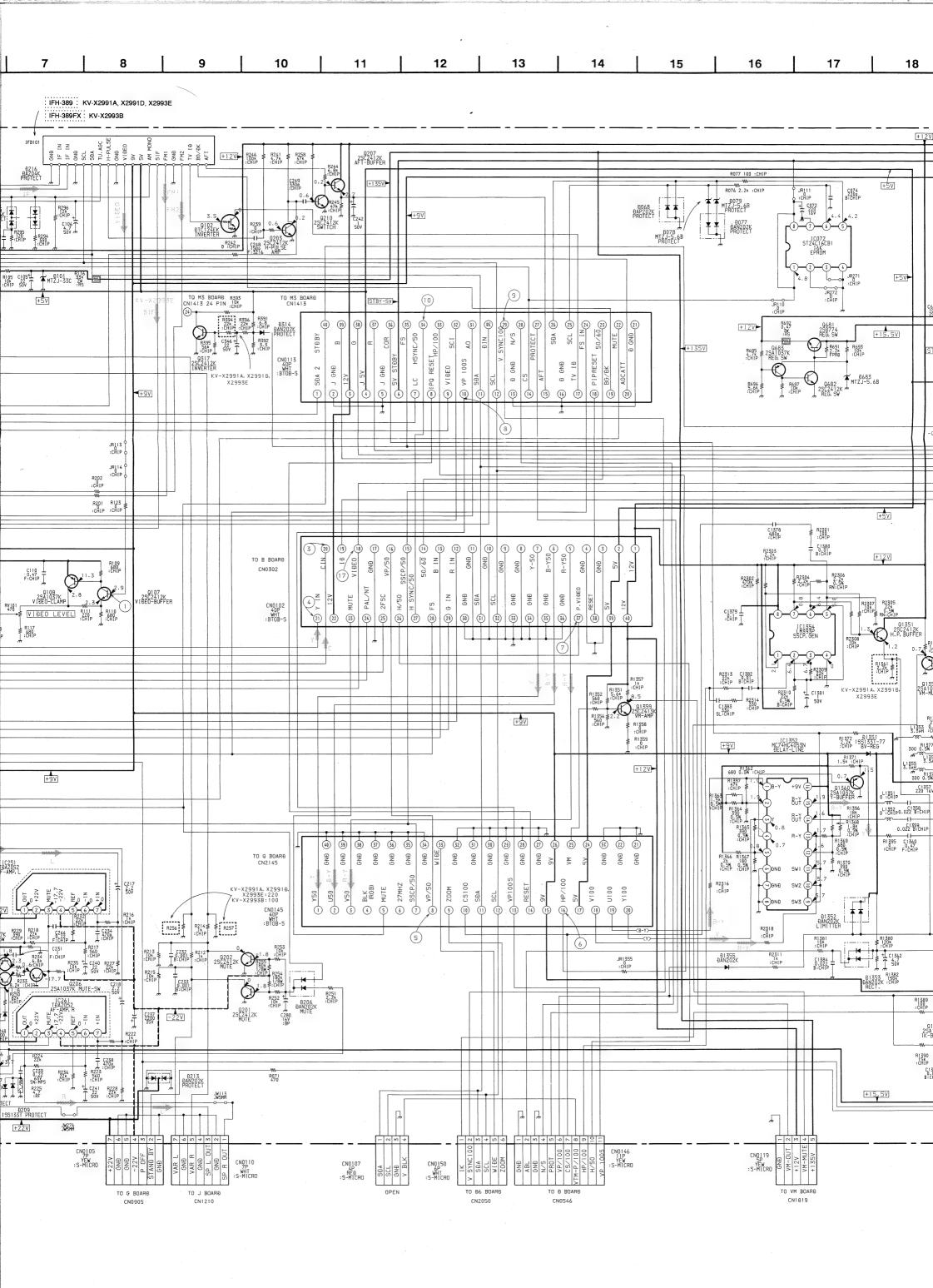
^{• :} Pattern of the rear side.



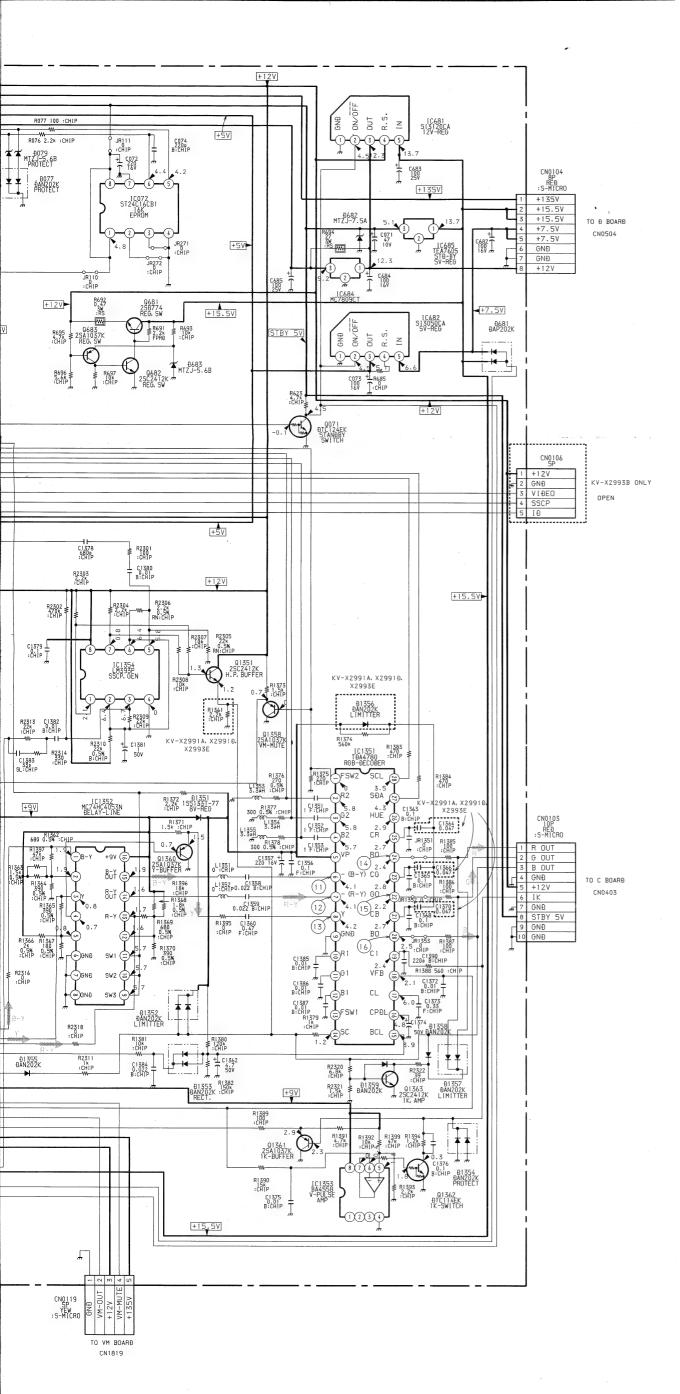
A Doord

— A Board —					
IC	DIODE				
IC072 D-10 IC251 B-5 IC261 B-3 IC270 B-8 IC681 D-11 IC682 B-11 IC684 C-12 IC1351 E-11 IC1352 D-12 IC1353 F-13 IC1354 E-13	D068 D-10 D069 B-3 D071 B-3 D073 B-3 D075 B-3 D077 D-10 D078 D-10 D101 B-1 D206 B-9 D207 B-10 D208 A-2				
TRANSISTOR	D209 B-3 D210 B-3 D211 A-6				
Q071 B-12 Q101 C-1 Q102 D-7 Q103 C-2 Q106 E-1 Q107 E-2 Q108 E-2 Q201 A-10 Q202 A-10 Q203 D-7 Q204 A-3 Q205 A-3 Q206 A-3 Q206 A-3 Q207 D-8 Q209 B-10 Q210 D-8 Q270 B-7 Q681 C-13 Q683 D-12	D212 A-5 D213 A-11 D215 C-6 D216 C-6 D261 A-9 D262 A-9 D270 B-8 D681 B-13 D682 C-11 D683 C-12 D1351 E-11 D1352 E-12 D1353 F-12 D1354 F-12 D1355 E-12 D1356 E-11 D1357 E-15 D1358 E-15 D1359 E-15				
Q1351 E-13 Q1358 E-11 Q1359 F-8	VARIABLE RESISTOR				
Q1360 E-12 Q1361 F-12 Q1362 F-12 Q1363 E-15	RV101 D-2				

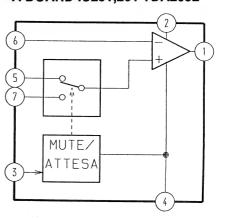




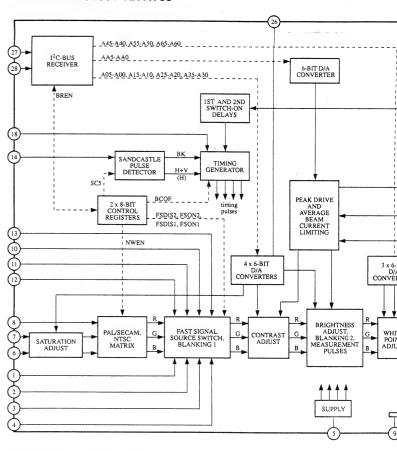




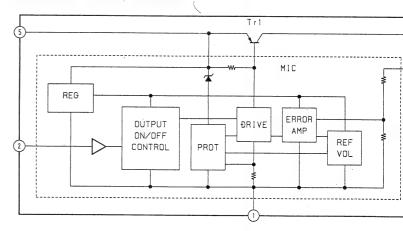
A BOARD IC251,261 TDA2052



A BOARD IC1351 TDA4780



A BOARD IC681 SI3120CA

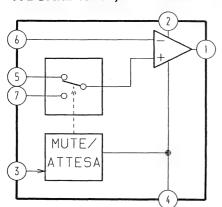


TO Đ BOARĐ

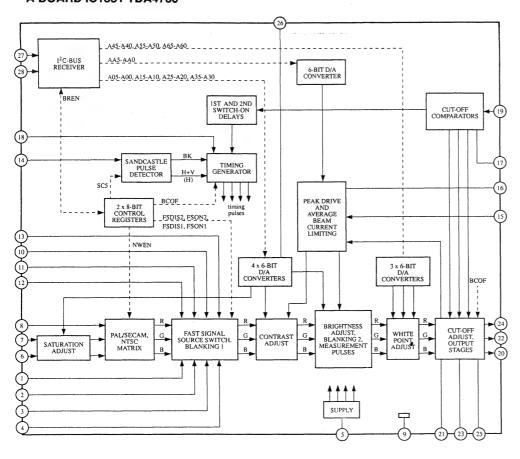
KV-X2993B ONLY OPEN

CN0504

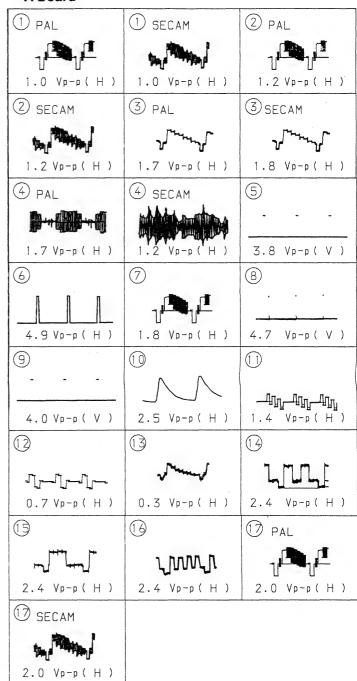
A BOARD IC251,261 TDA2052



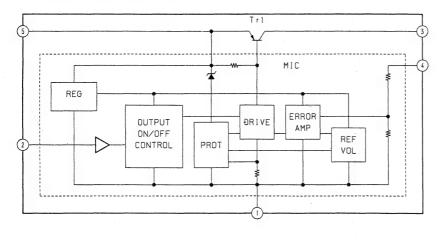
A BOARD IC1351 TDA4780

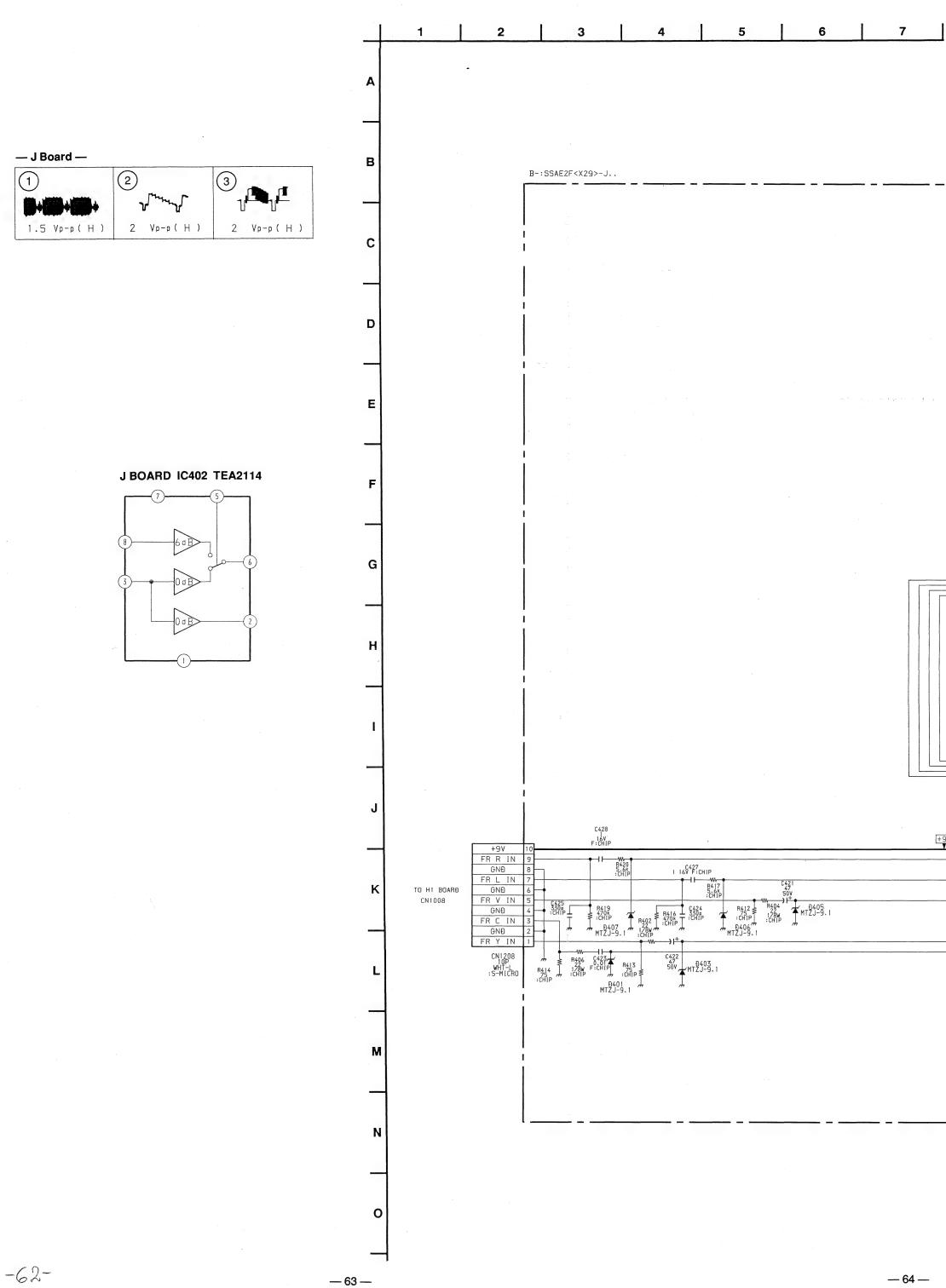


— A Board —

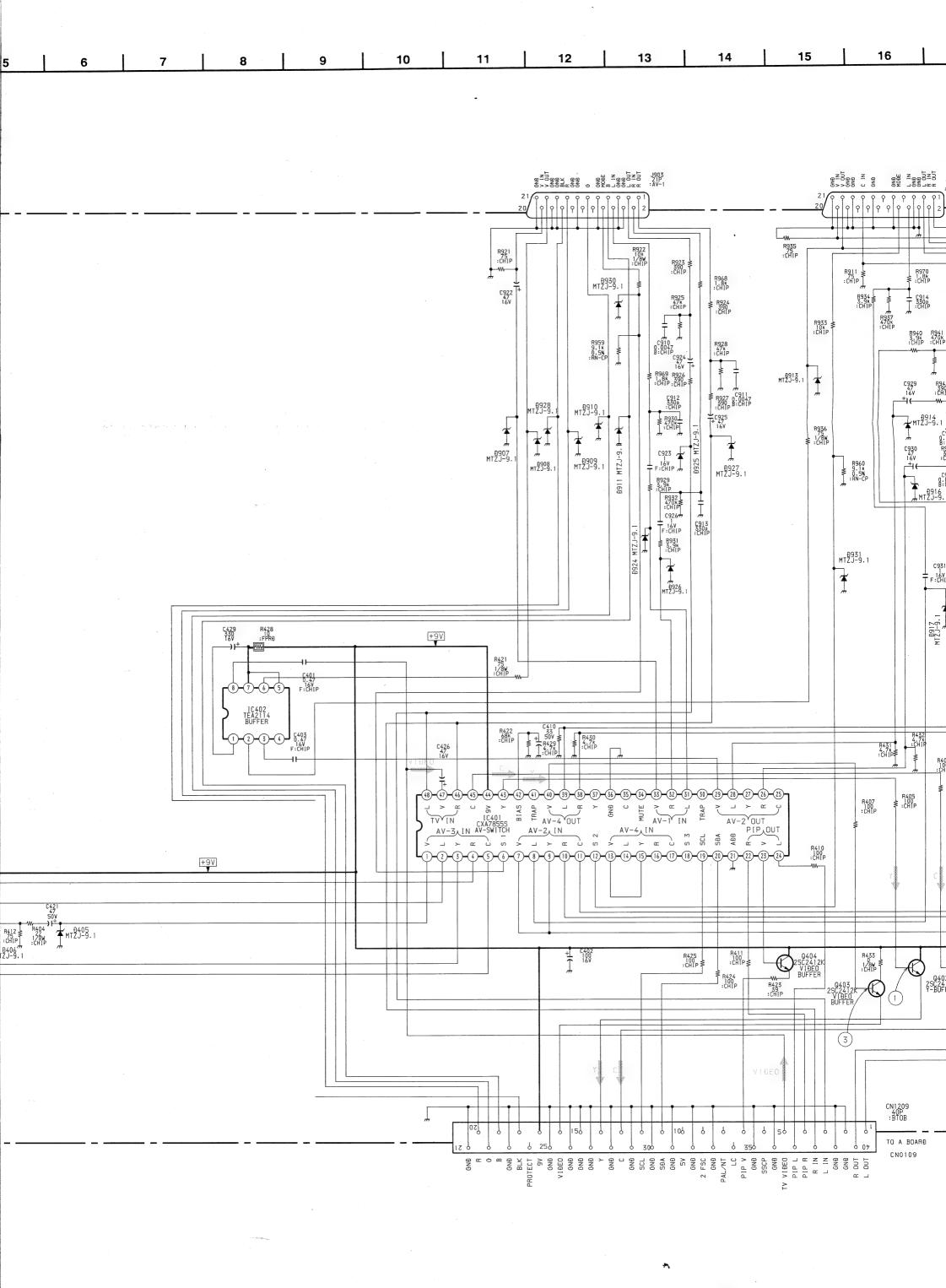


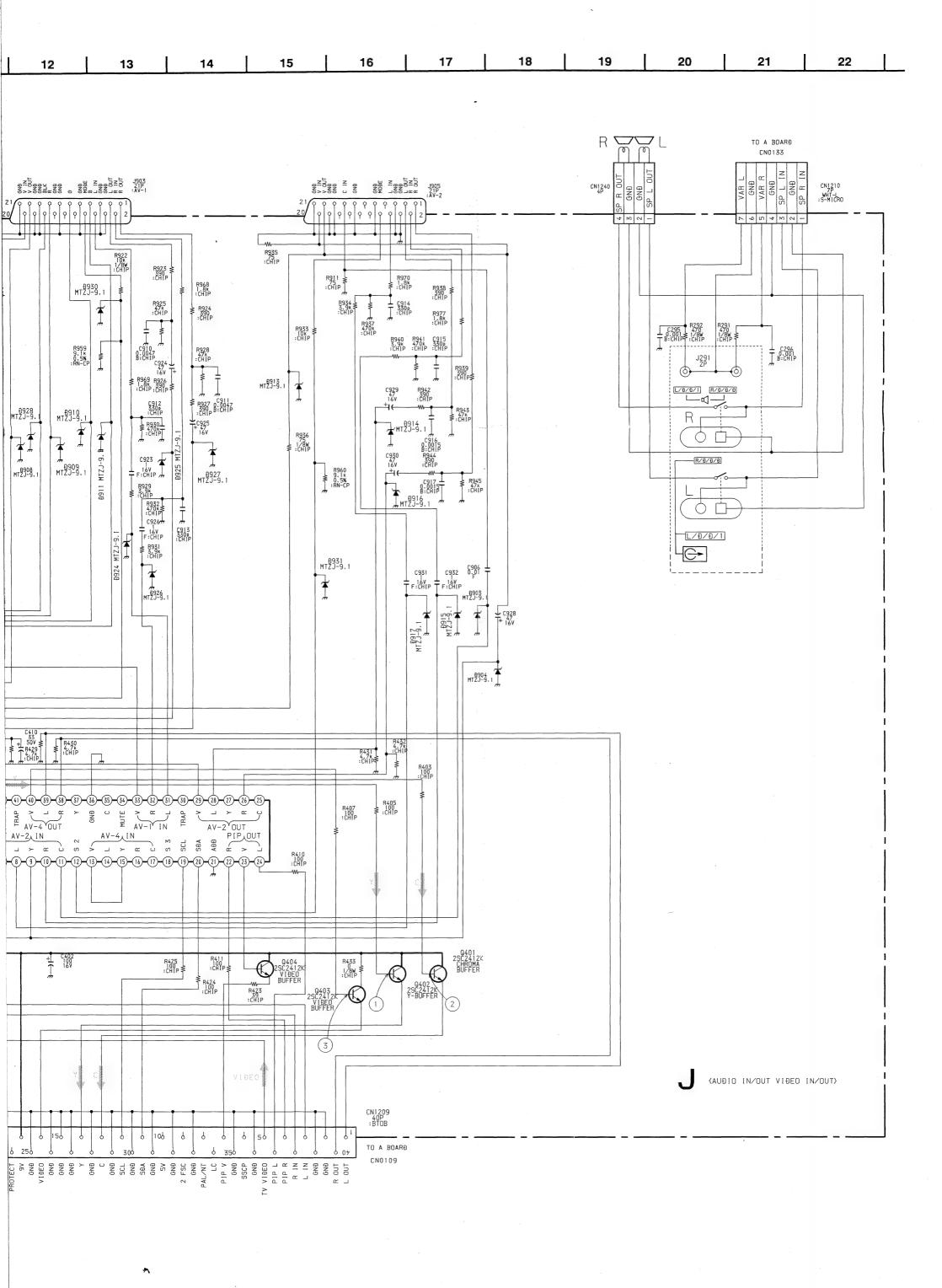
A BOARD IC681 SI3120CA





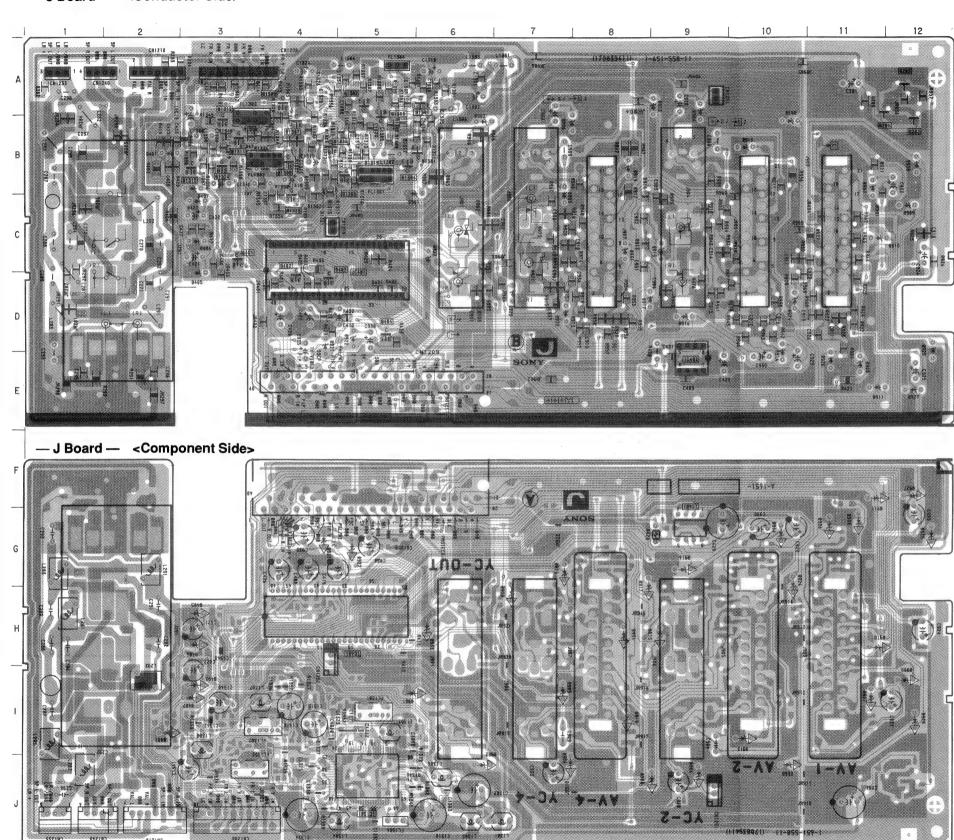
— 64 **—**







_ J Board _ <Conductor Side>



— J Board —

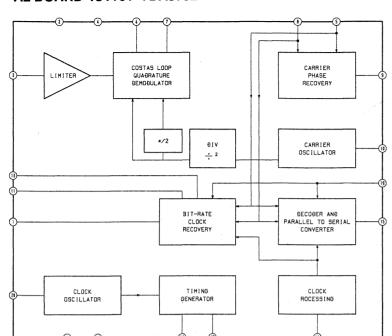
_ 0 DC	ai u -		
IC	;	D903	A-9
IC401 IC402	D-5 E-9	D904 D907 D908	A-9 B-11 E-11
TRANSI	STOR	D909 D910	D-12 D-11 E-11 B-10 E-10 C-9 D-9 D-8 D-10
Q401 Q402 Q403 Q404	C-3 D-3 D-4 D-5	D911 D913 D914 D915 D916	
DIO	DE	D917 D924	
D401 D403 D405 D406 D407	B-2 C-3 D-3 C-3 B-3	D925 D926 D927 D928 D930 D931	E-12 E-11 E-12 B-12 B-10 D-8

- Pattern from the side which enables seeing.
- Pattern of the rear side.

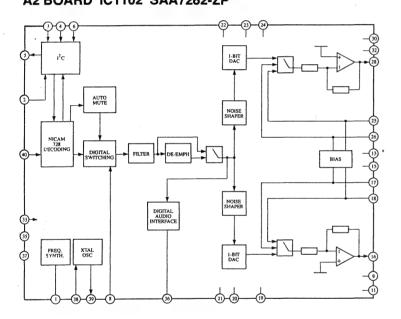
KV-X299

KV-X299

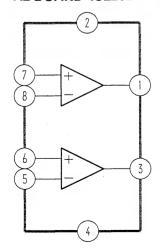
A2 BOARD IC1101 TDA8732



A2 BOARD IC1102 SAA7282-ZP



A2 BOARD IC2202 TDA2822M



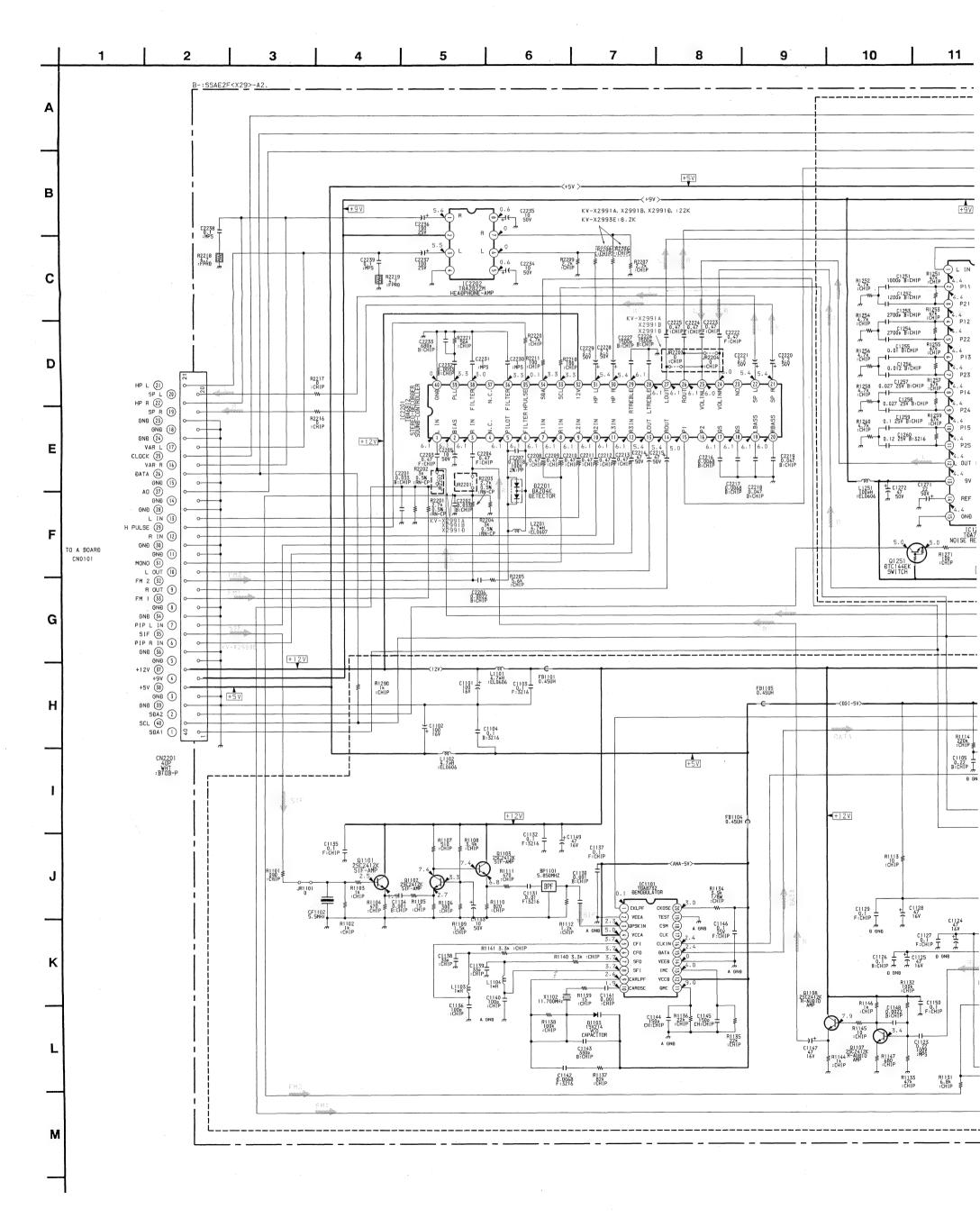
[NICAM, AUDIO PROCESSING]

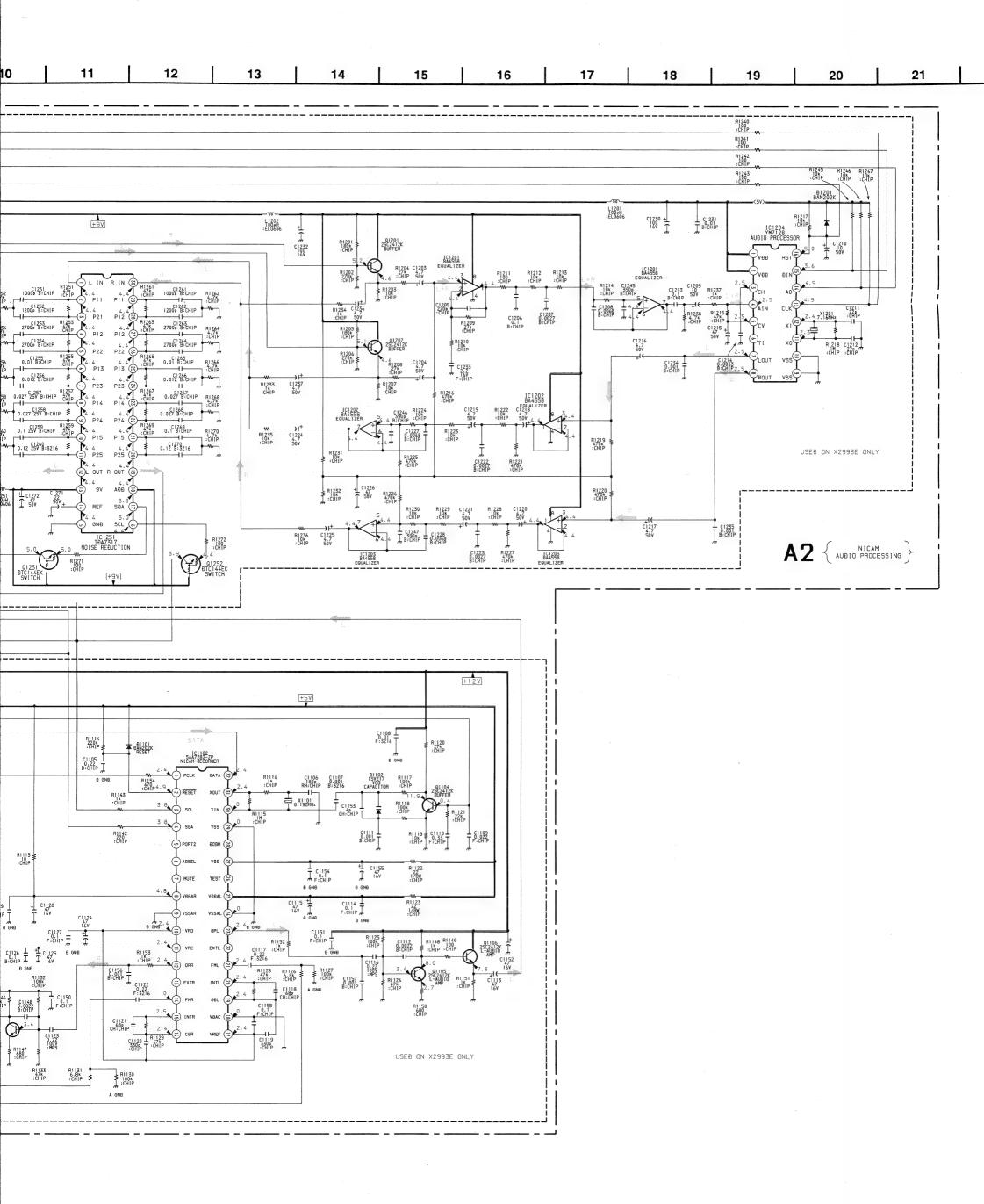
— A2 Board —

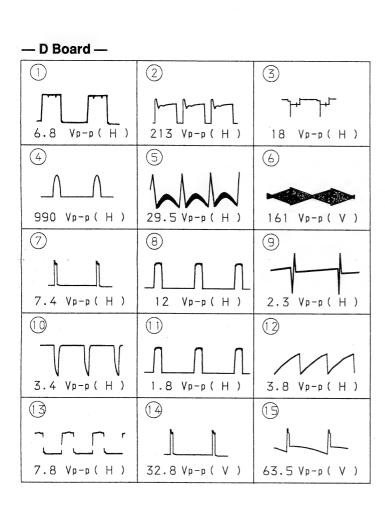
— A2 Board —			1	2	3	4	5	6	7
IC1101 C-2 Q110 IC1102 B-2 Q110 IC1201 B-6 Q120 IC1203 B-5 Q120 IC1203 A-5 Q120 IC1204 A-6 Q120 IC1251 B-4	05 C-3 06 C-4 07 C-1 08 C-2 201 B-5 202 B-5 251 B-3 252 B-3	A		-559-11 (1708394	C1279		1251 1236 11236 11236 11236 11236 11236 11236 11236 11236 11236	11216 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201 11201	(51261) H (5
IC2201 C-5 IC2202 E-6 D	DIODE		革革	XX					Lum
Q1101 E-1 D111 Q1102 D-1 D12	01 B-2 02 B-3 03 D-1 201 A-6 201 C-6	В	C1156 C1125	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	上工艺器	57 C1295 C1293 C1291 C12		1227 1228	in the second se
		D	1157 1157	26 S S S S S 20	R2210 R2210	C	C2214 C2215 C2215 C2215	82201	G2220 G2220 G2220 G2220 G22220 G22220

- Pattern from the side which enables seeing.
- : Pattern of the rear side.

— 69 **—**







В

C

D

Ε

G

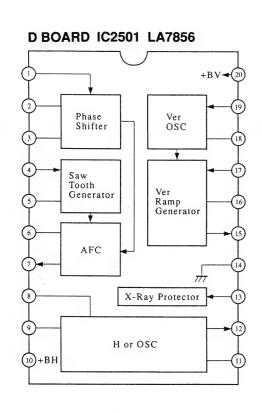
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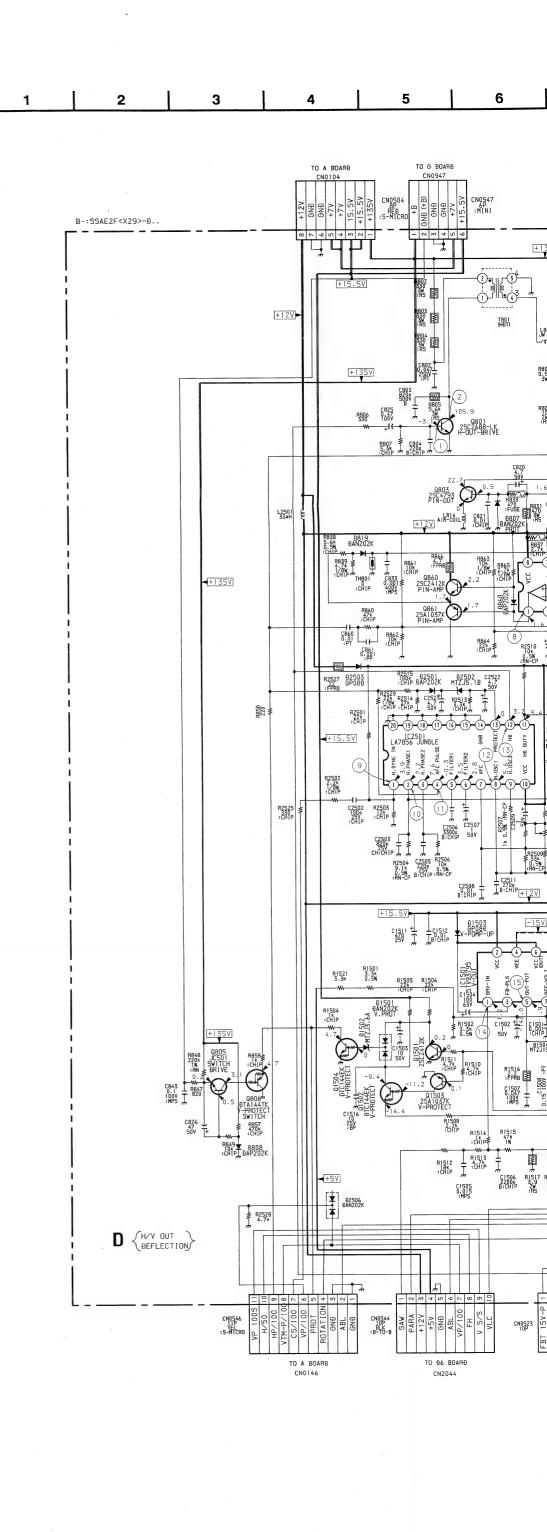
L

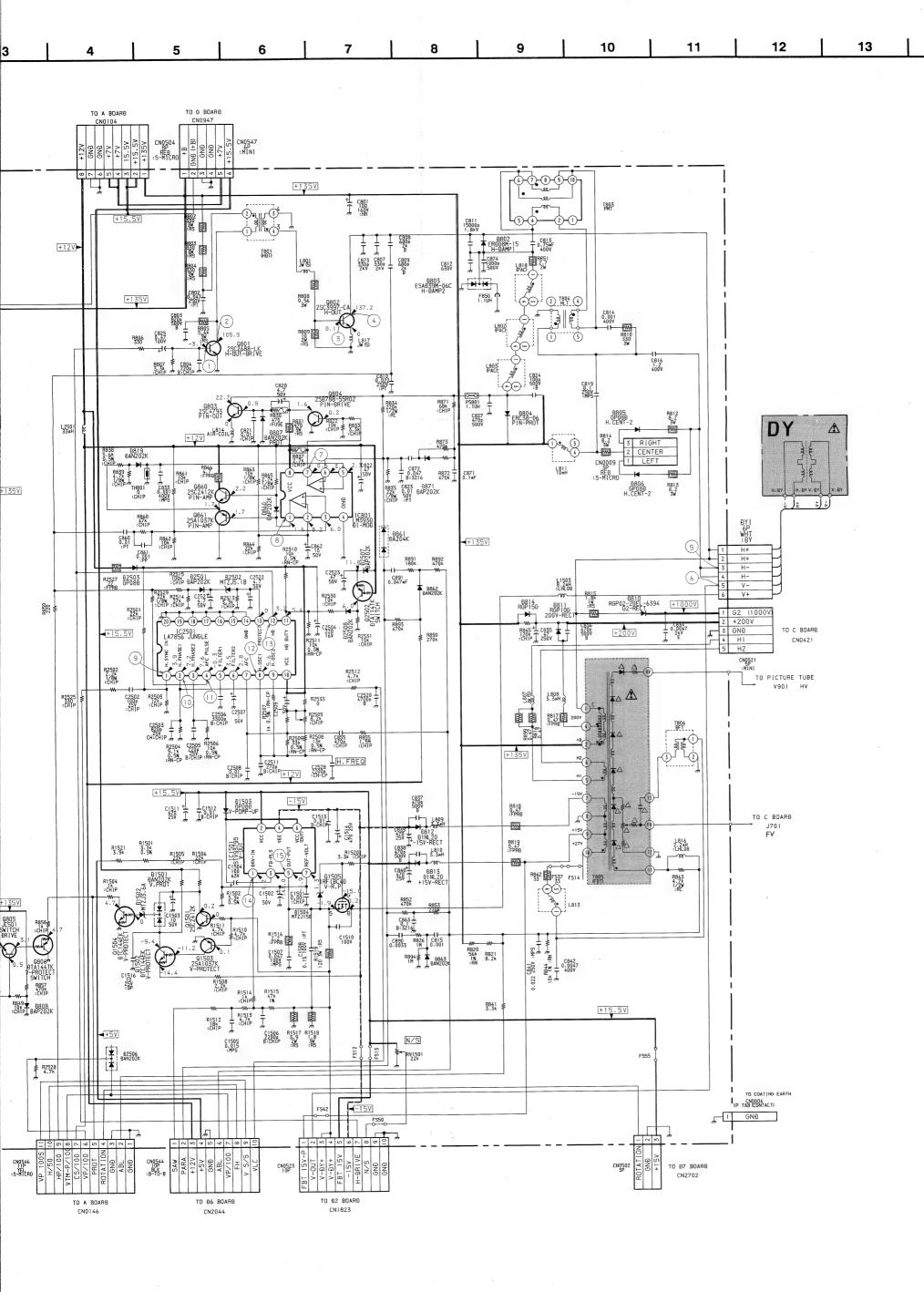
M

N

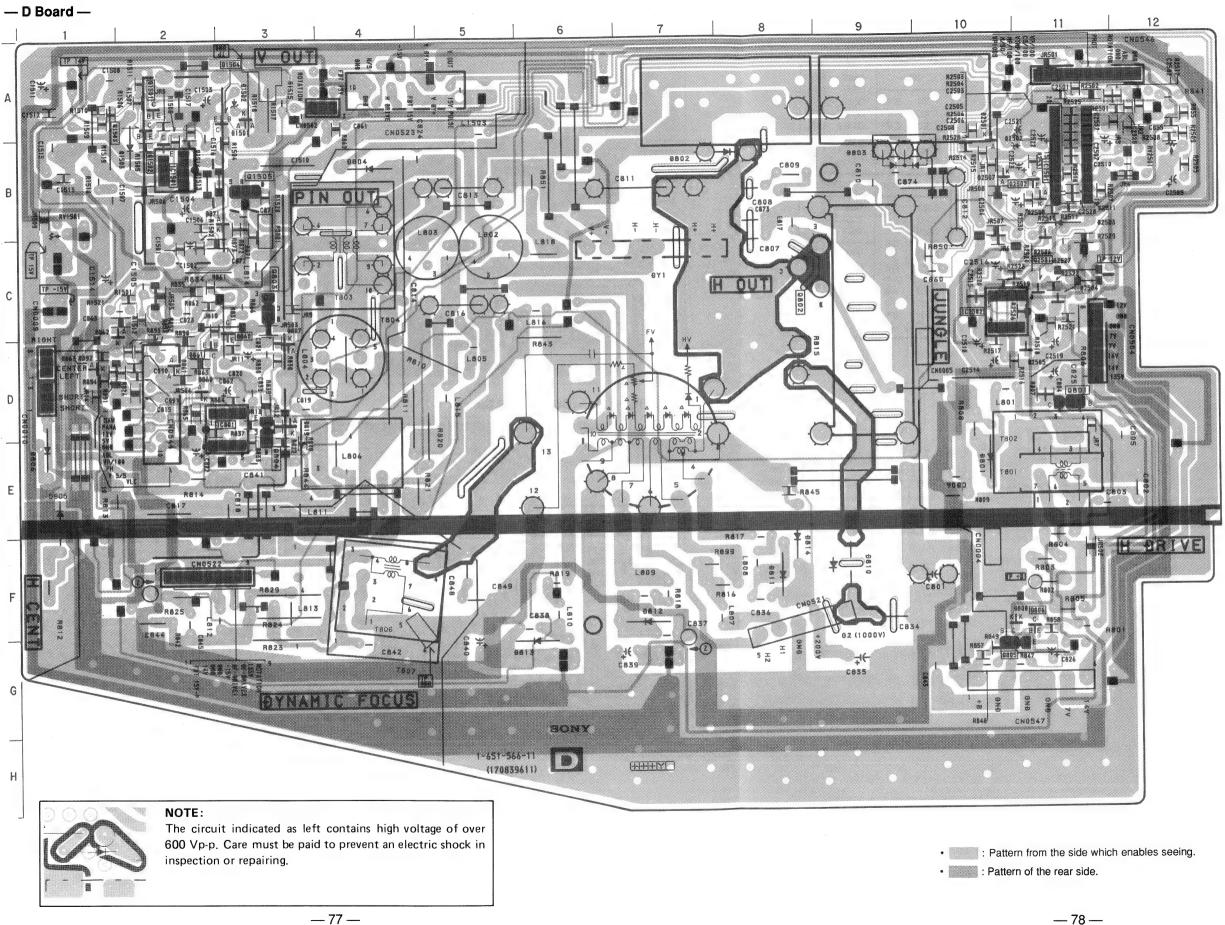
0









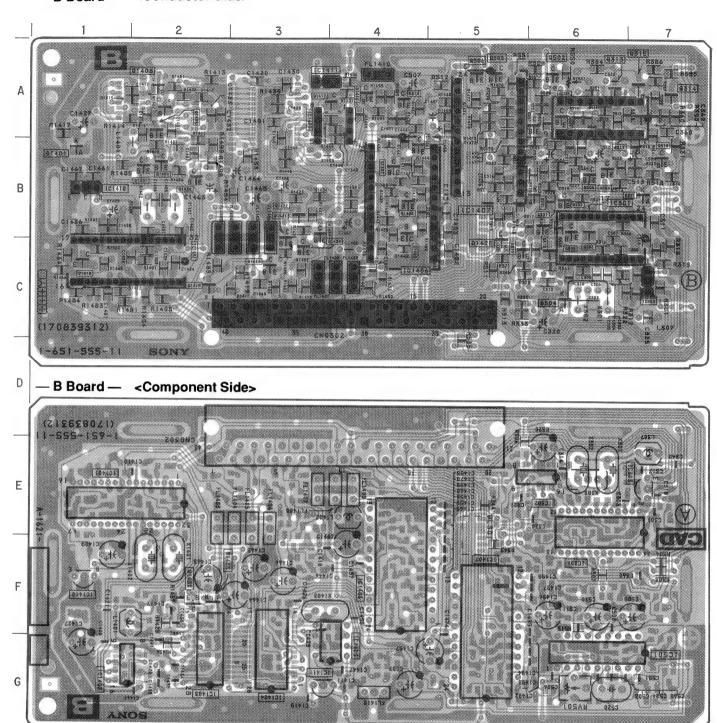


IC		D806 D807	E-1 D-3
IC801 IC1501 IC2501	D-3 B-2 B-11	D808 D810 D811 D812	F-10 F-9 F-8 F-7
TRANSIS	IOR	D813	G-6
Q861 Q1501	D-11 C-8 C-3 E-3 G-10 F-11 C-3 D-2 A-2 B-2 A-2 A-3 B-3 B-11	D814 D819 D860 D861 D862 D863 D871 D1501 D1502 D1503 D2501 D2502	F-8 D-3 D-2 D-2 C-1 D-1 B-2 A-3 A-3 B-2 A-10 B-11 B-11 B-11 B-11
DIOD	E	VARIABLE RESISTOR	
D803 D804	B-8 B-9 B-4 E-1	RV2501 RV1501	

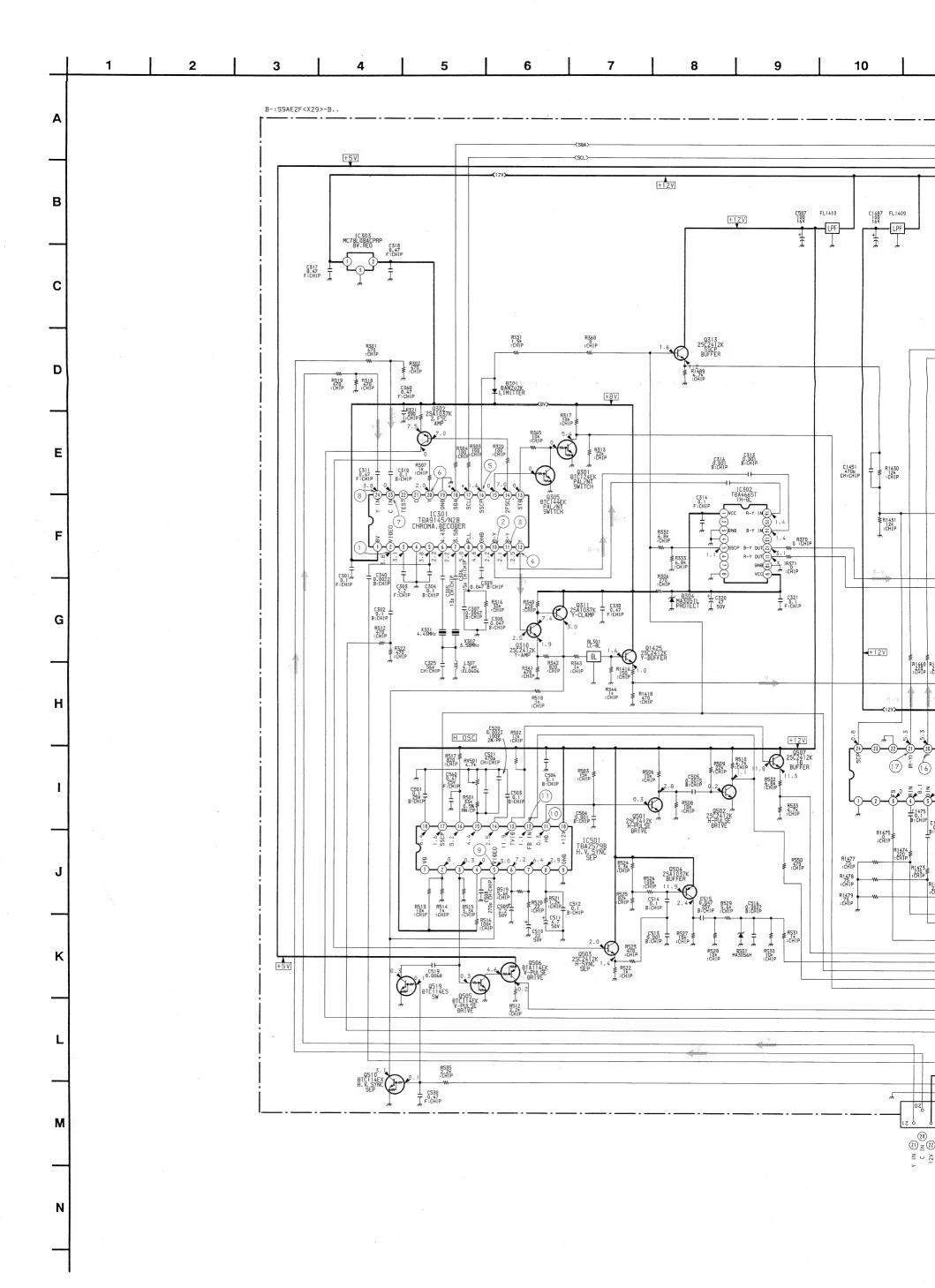
PICTURE IN PICTURE CHROMA DECODER

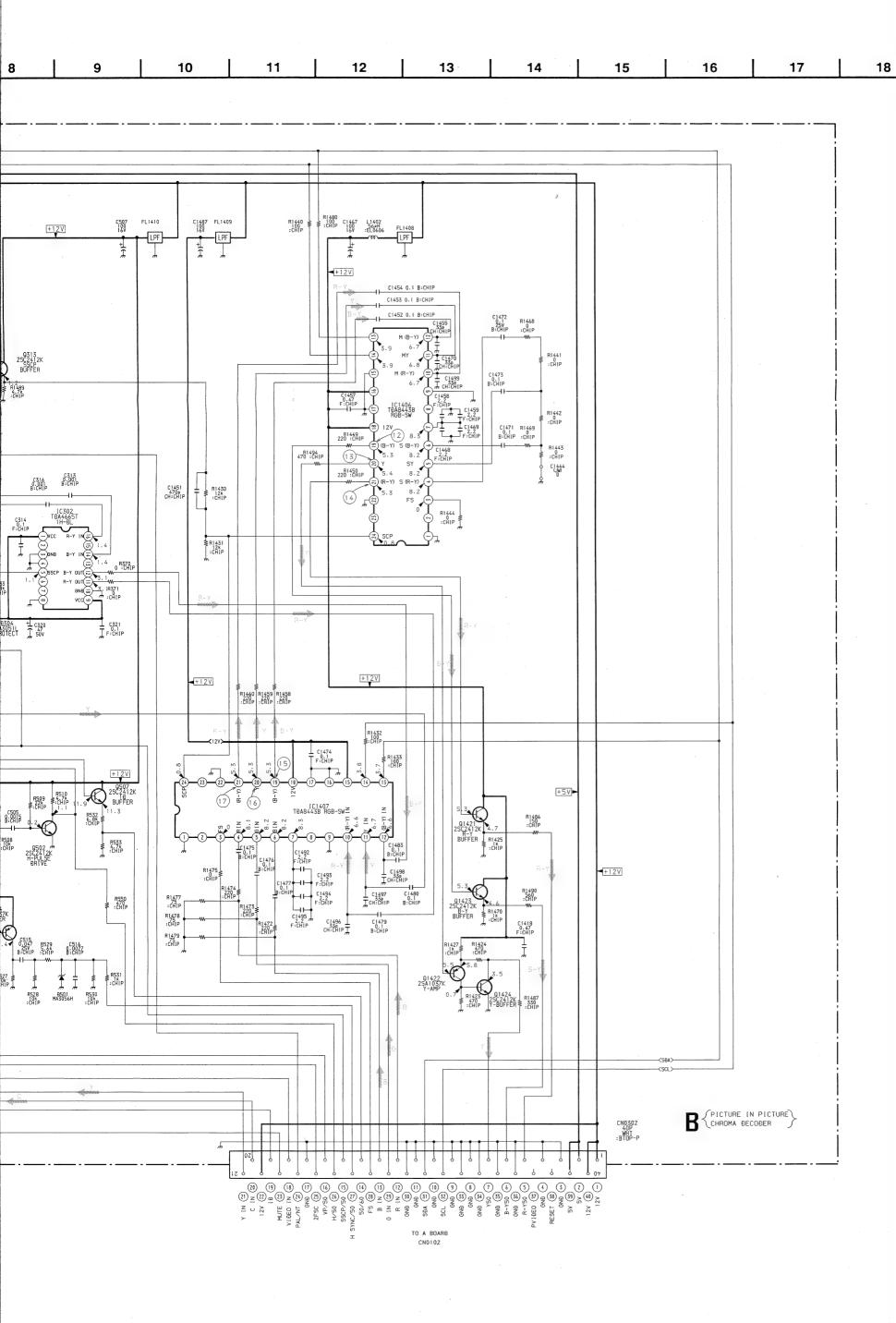
— B Board — <Conductor Side>

— B Board —				
IC		Q506 Q507	A-5 A-6	
IC301 IC302 IC303 IC501 IC1406 IC1407	B-6 E-6 C-7 A-6 B-4 B-5	Q510 Q1421 Q1422 Q1423 Q1424 Q1425	A-7 B-3 B-3 B-3 C-3	
TRANSIS	STOR	DIODE		
0004				
Q301 Q302 Q305	B-6 B-6	D301 D304 D501	B-7 C-6 B-6	
Q302	B-6	D304	C-6 B-6	



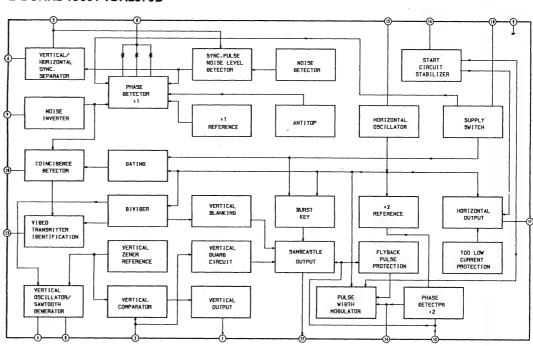
- Pattern from the side which enables seeing.
- Pattern of the rear side.



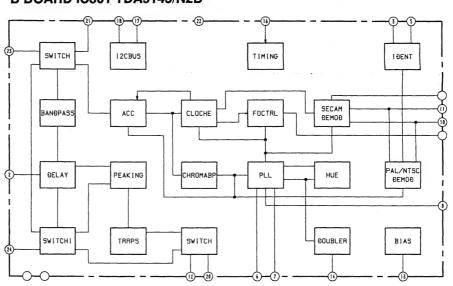


19

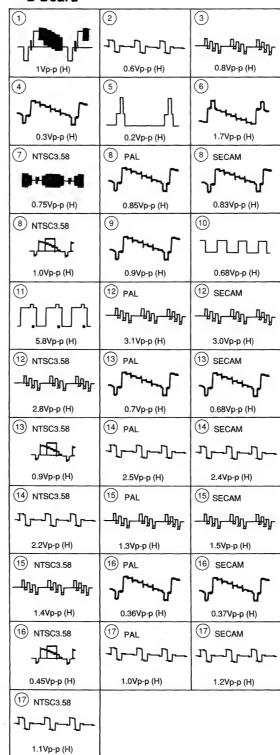
B BOARD IC501 TDA2579B



B BOARD IC301 TDA9145/N2B



- B Board -

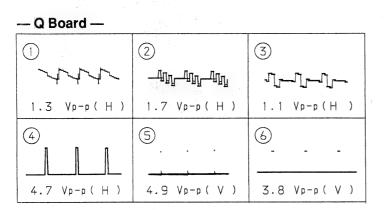


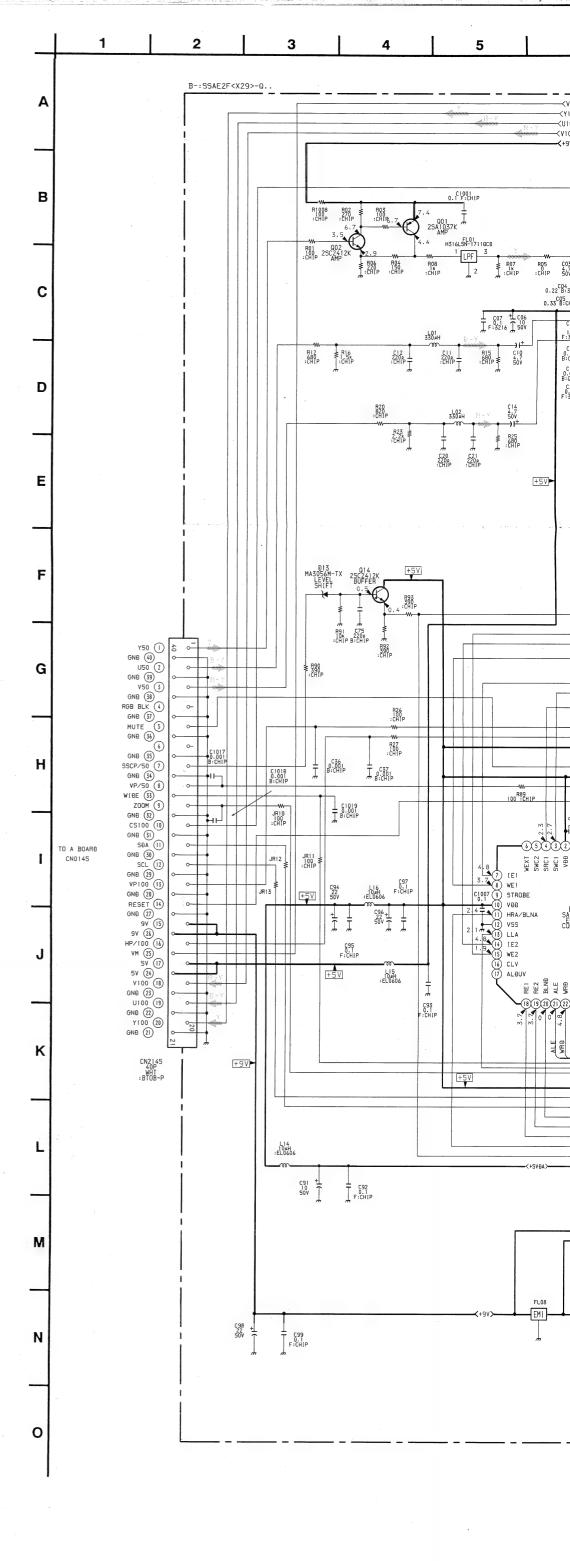
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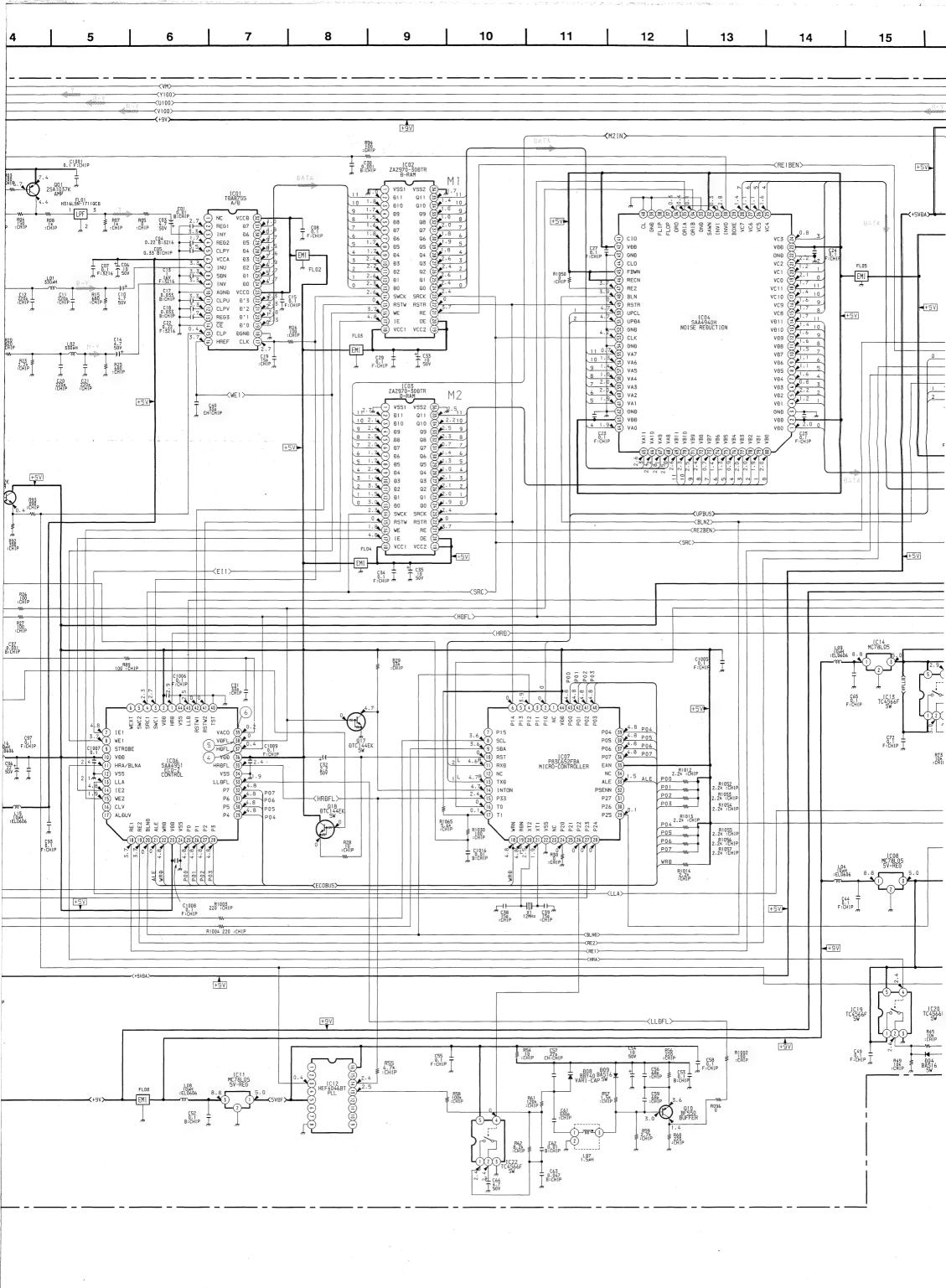
19

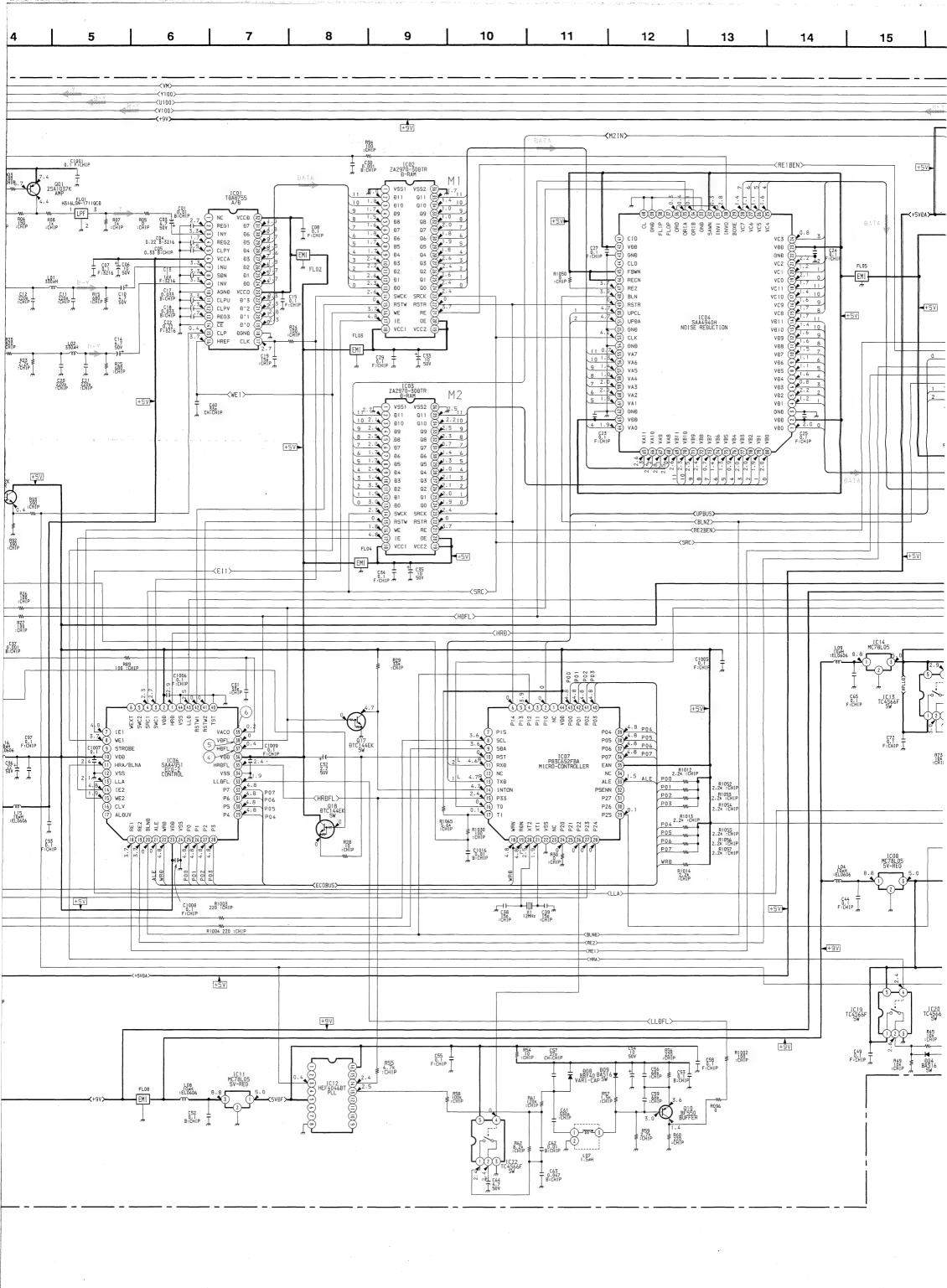
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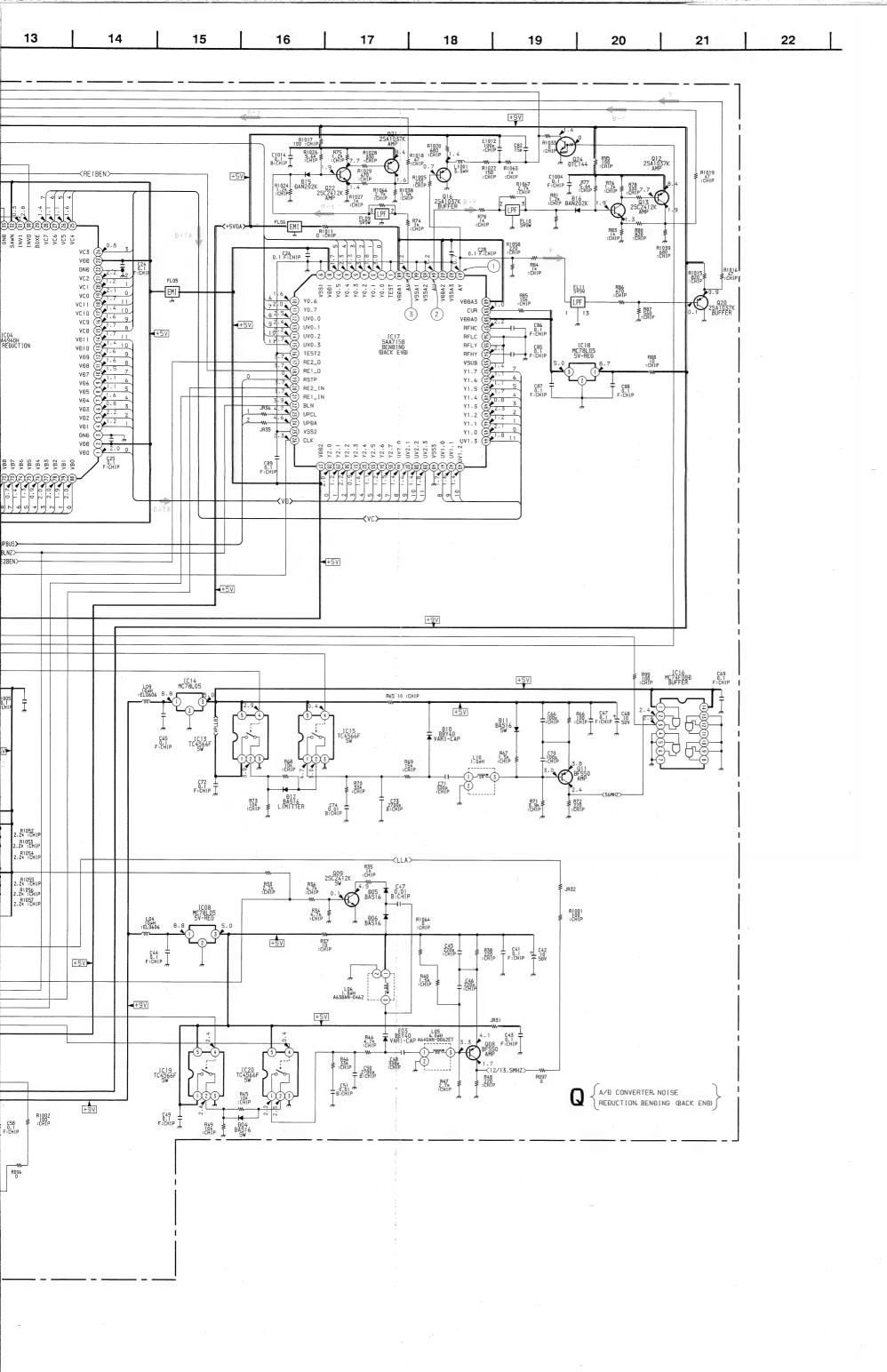
21







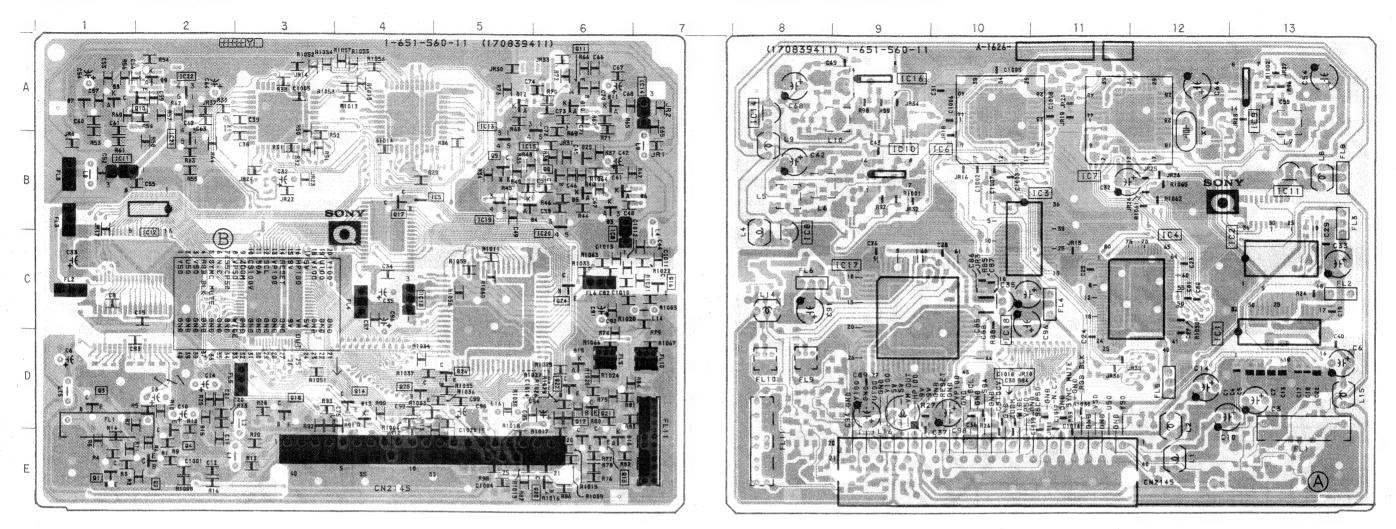






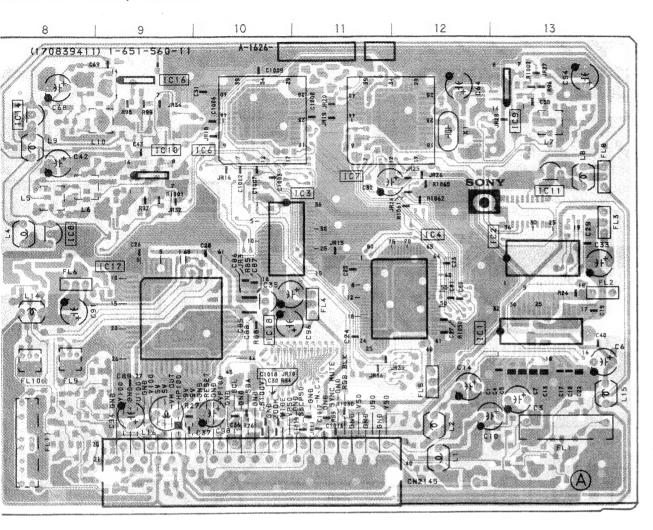
- Q Board - < Conductor Side>

- Q Board - < Component Side>



- · Pattern from the side which enables seeing.
- : Pattern of the rear side.

Q Board — <Component Side>



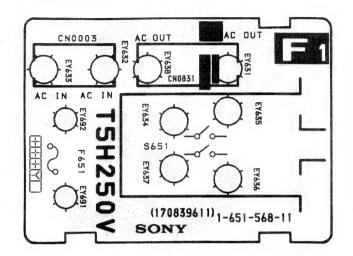
- Pattern from the side which enables seeing.
- : Pattern of the rear side.

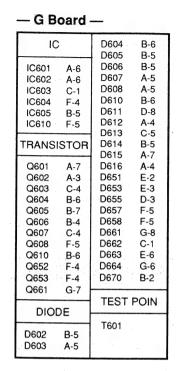
— Q Board —

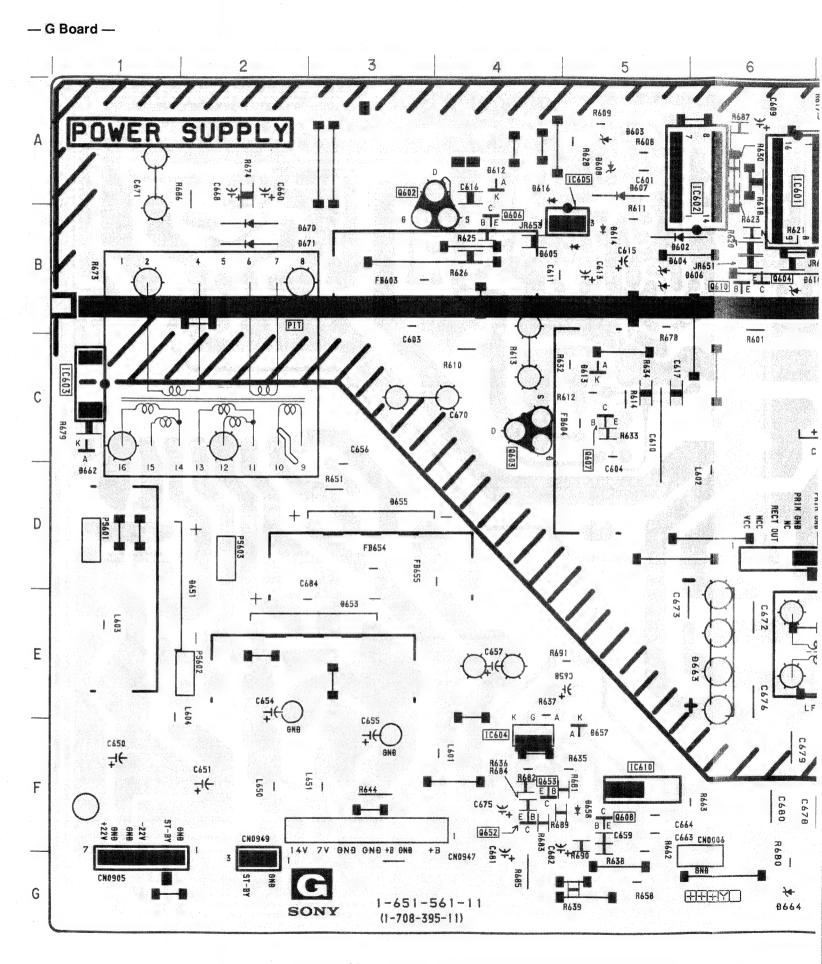
10		Q8 Q9	B-6 B-5
IC1 IC2 IC3 IC4 IC6 IC7 IC8 IC9 IC10 IC11 IC12	C-13 C-13 B-10 C-12 A-10 A-12 B-6 A-13 B-9 B-1 B-2	Q10 A11 Q12 Q13 Q14 Q16 Q17 Q18 Q20 Q21 Q22	A-2 A-6 D-6 E-6 D-4 C-7 B-4 D-3 E-6 D-6
IC13 IC14	B-5 A-7	DIC	DE
IC15 IC16 IC17 IC18 IC19 IC20 IC21 IC22	IC17 C-9 IC18 C-4 IC19 B-5 IC20 B-6 IC21 B-2	D3 D4 D5 D6 D8 D9 D10	B-6 B-5 B-6 B-6 A-1 A-2 A-6 A-6
TRANSISTOR		D12 D13	A-5 D-4
Q1 Q2	E-1 E-2	D15 D16	D-6 E-6

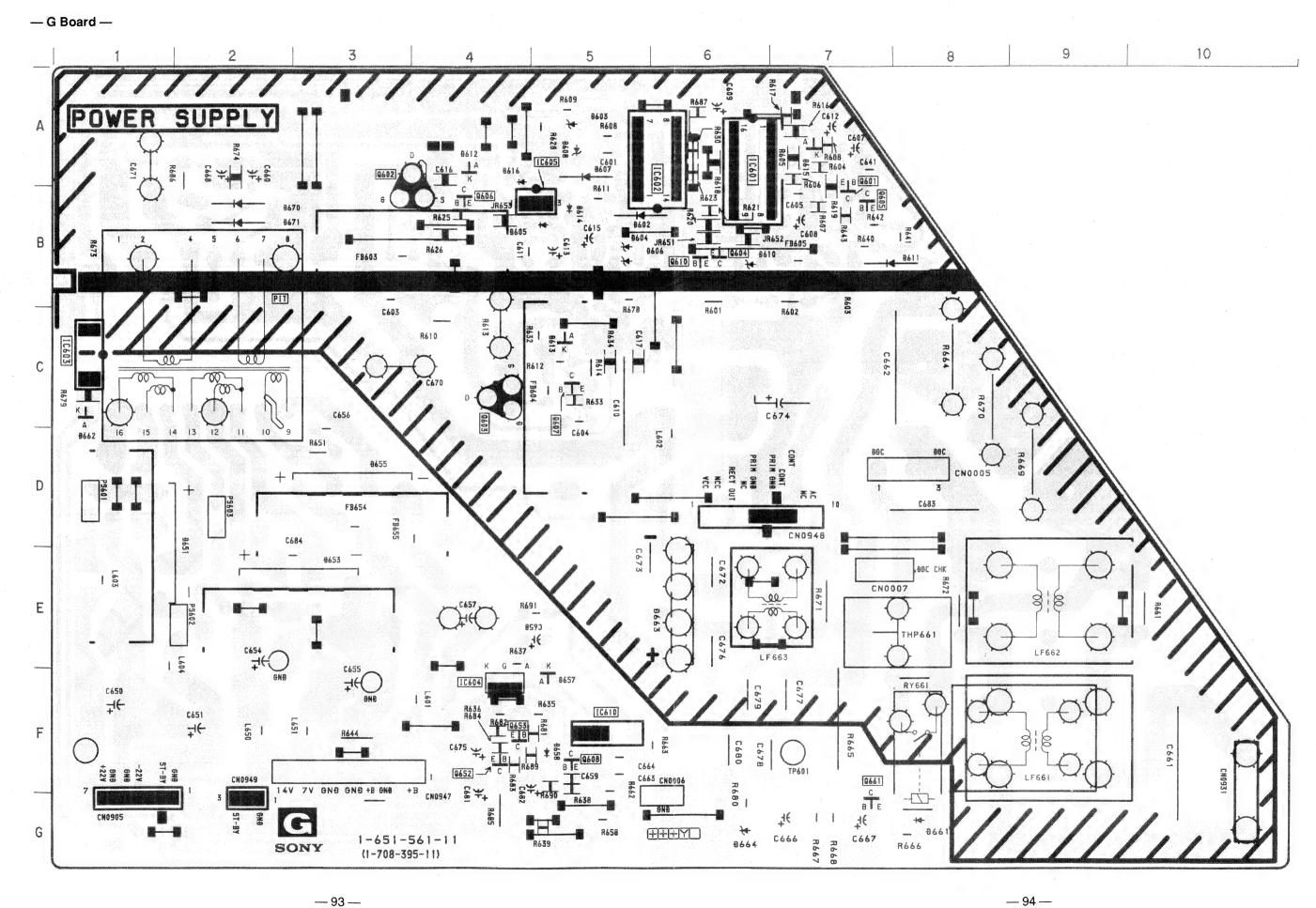


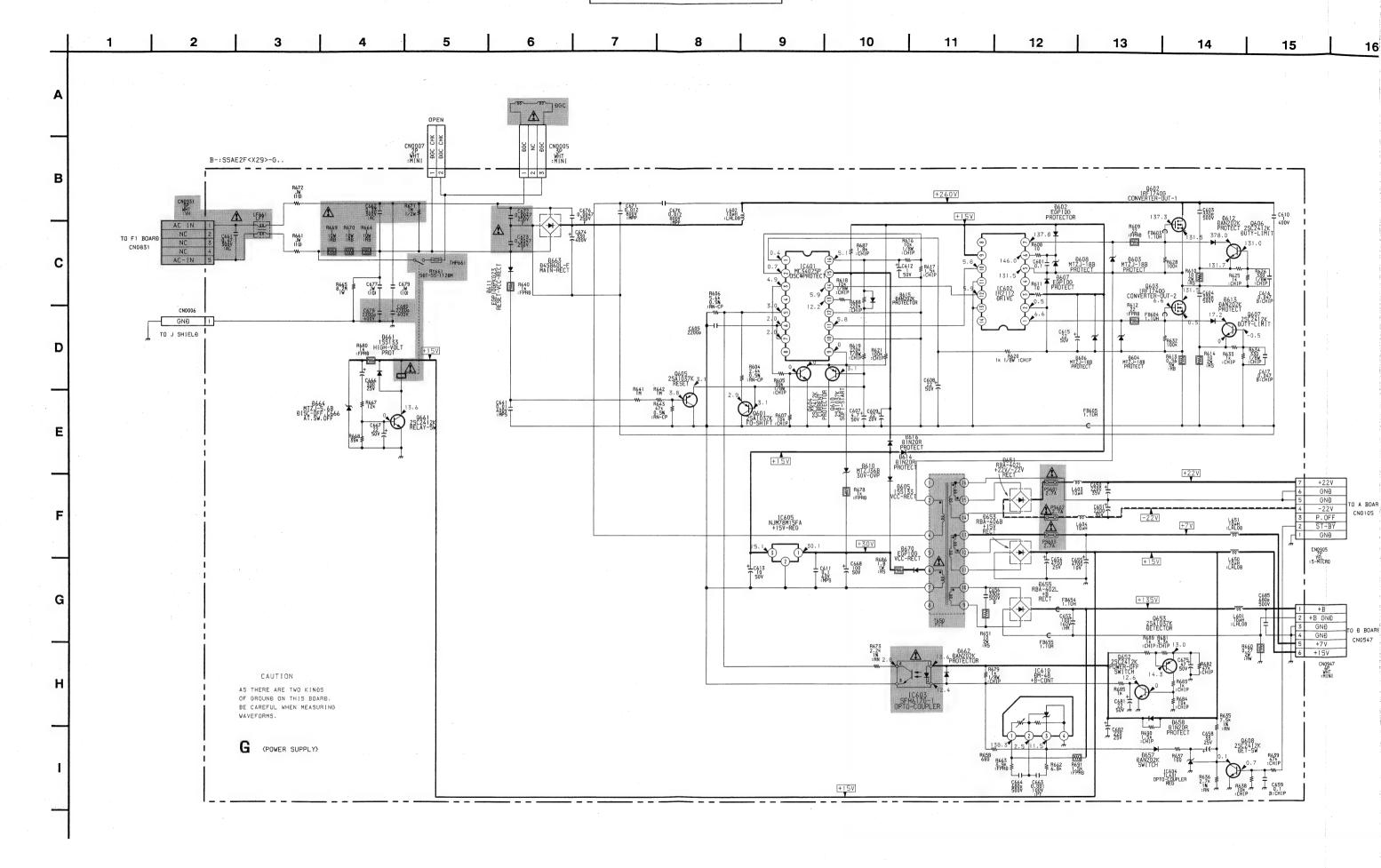
- F1 Board -



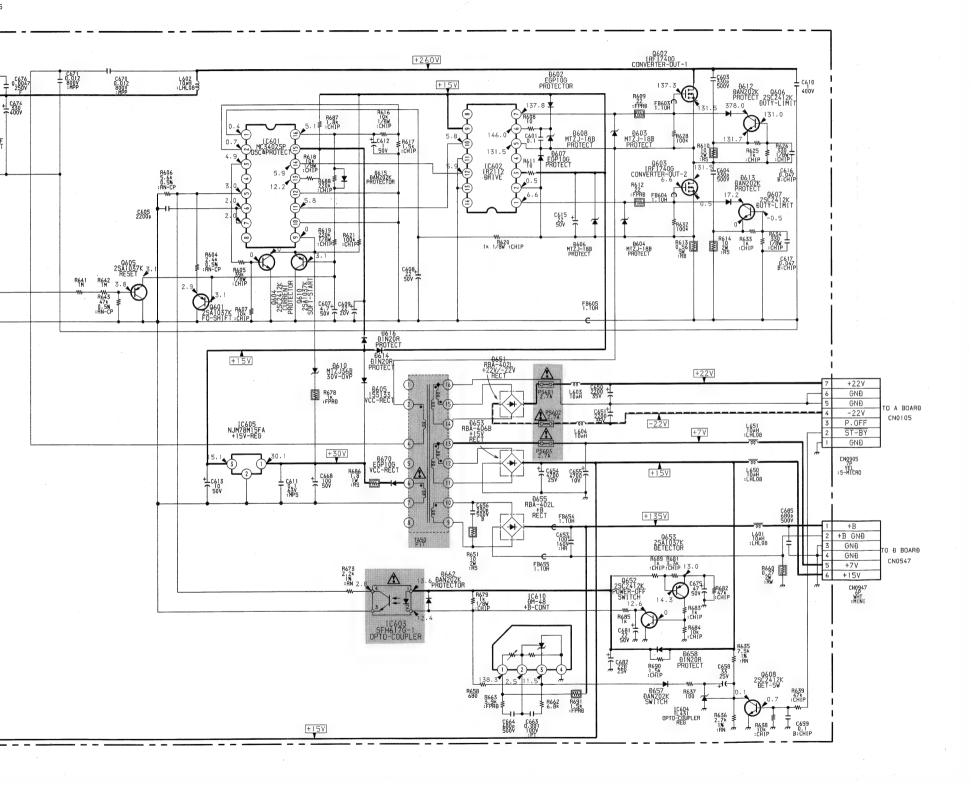


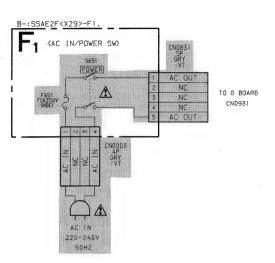


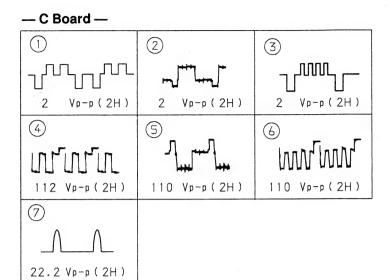




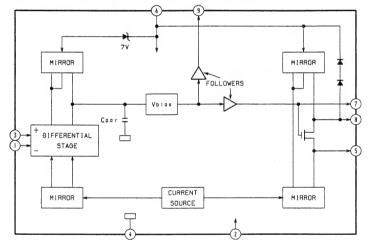
_		_			_									
		۱ ۵	1 10	44	ا مه ا	4.0	مد ا			1 47	1 40	10	20	1 04 1
	8) 9	10	11	12	13	I 14	15	16	1 1/	18	19	20	21
										S .	1			

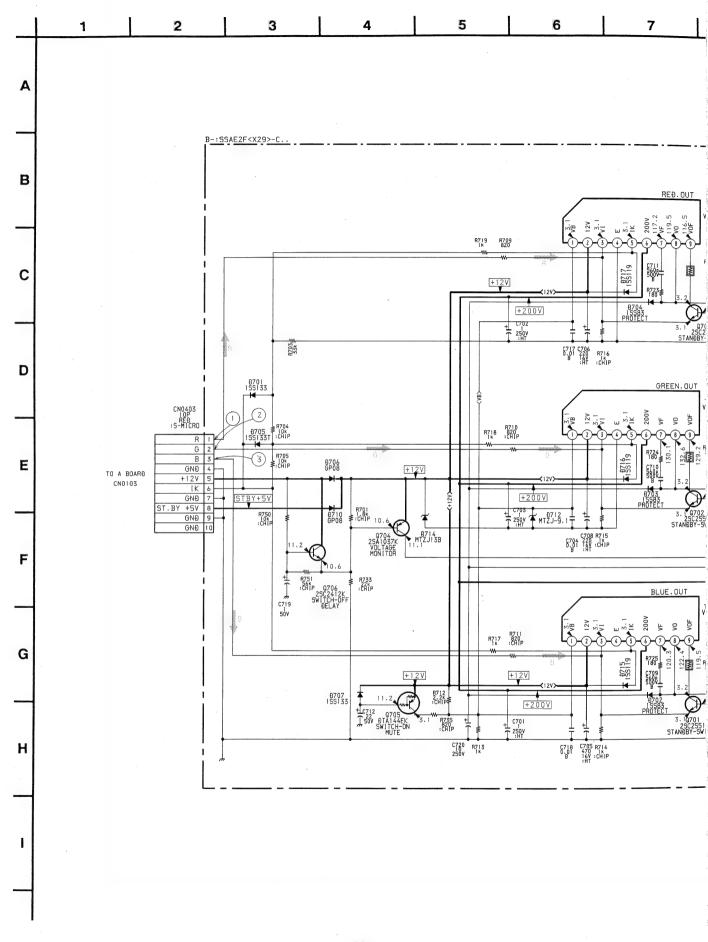




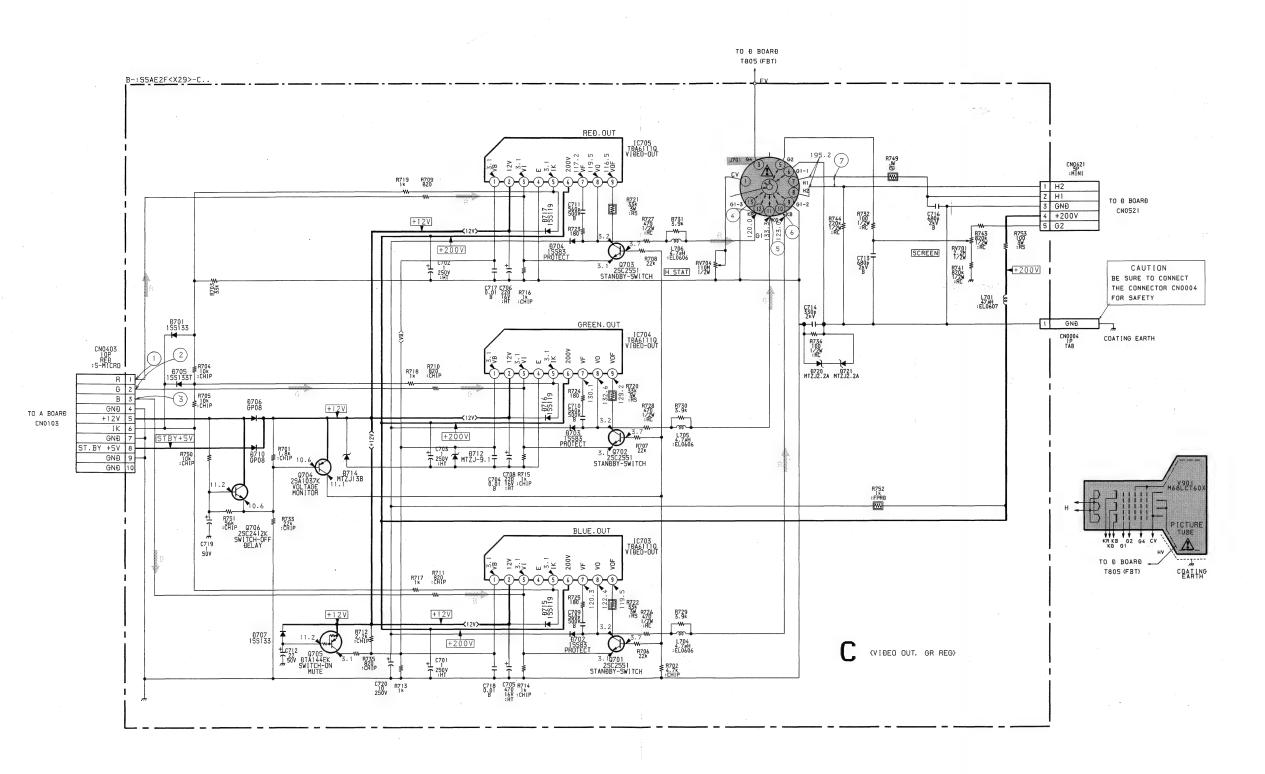


C BOARD IC703,704,705 TDA6111Q





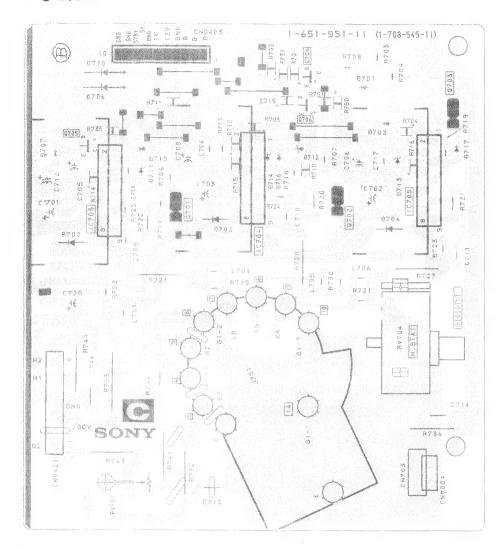
1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15





[VIDEO OUT, G2 REG]

— C Board —



MEGATEXT MICRO CONTROLLER

- M3 Board - < Conductor Side>

- M3 Board -

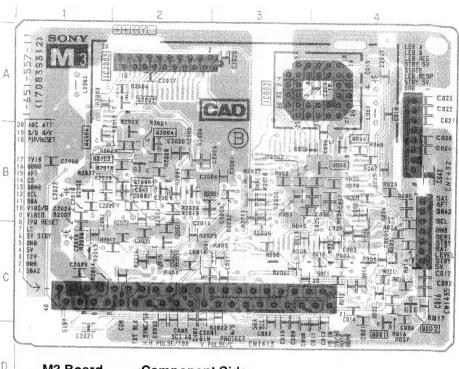
IC	
IC001	F-3
IC002	G-3
IC2002	A-3
IC2003	A-2

TRANSISTOR

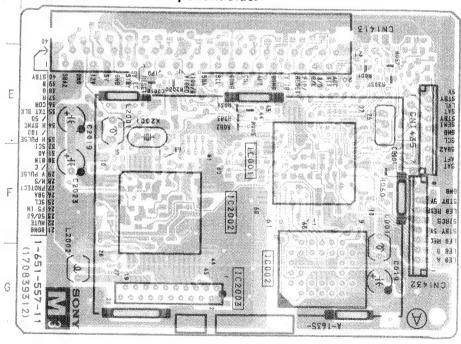
Q002 C-4 Q2002 A-2 Q2004 B-2 Q2005 C-2 Q2006 B-1 Q2008 B-2

DIODE

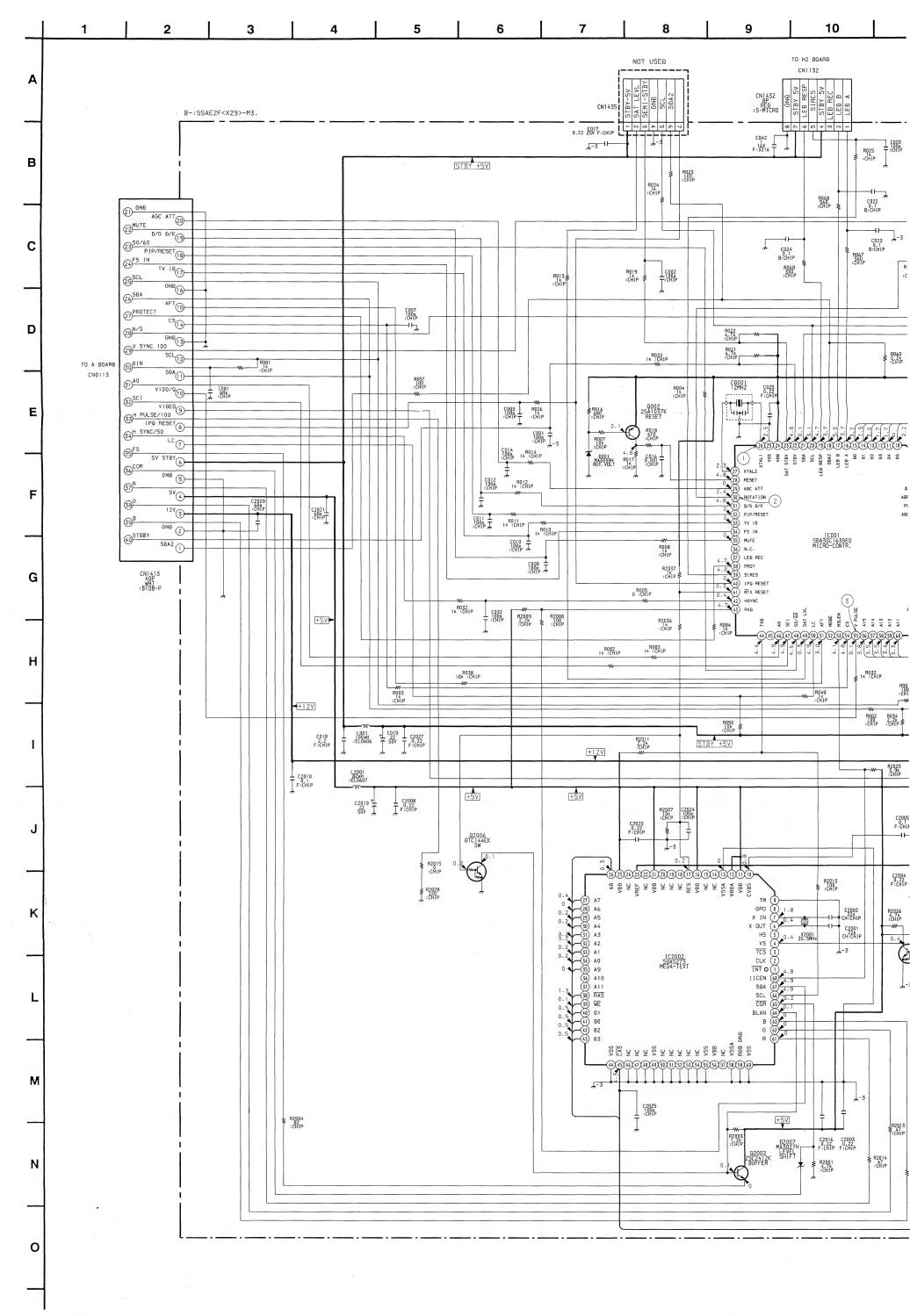
D001 D-4 D2001 B-2 D2007 B-3

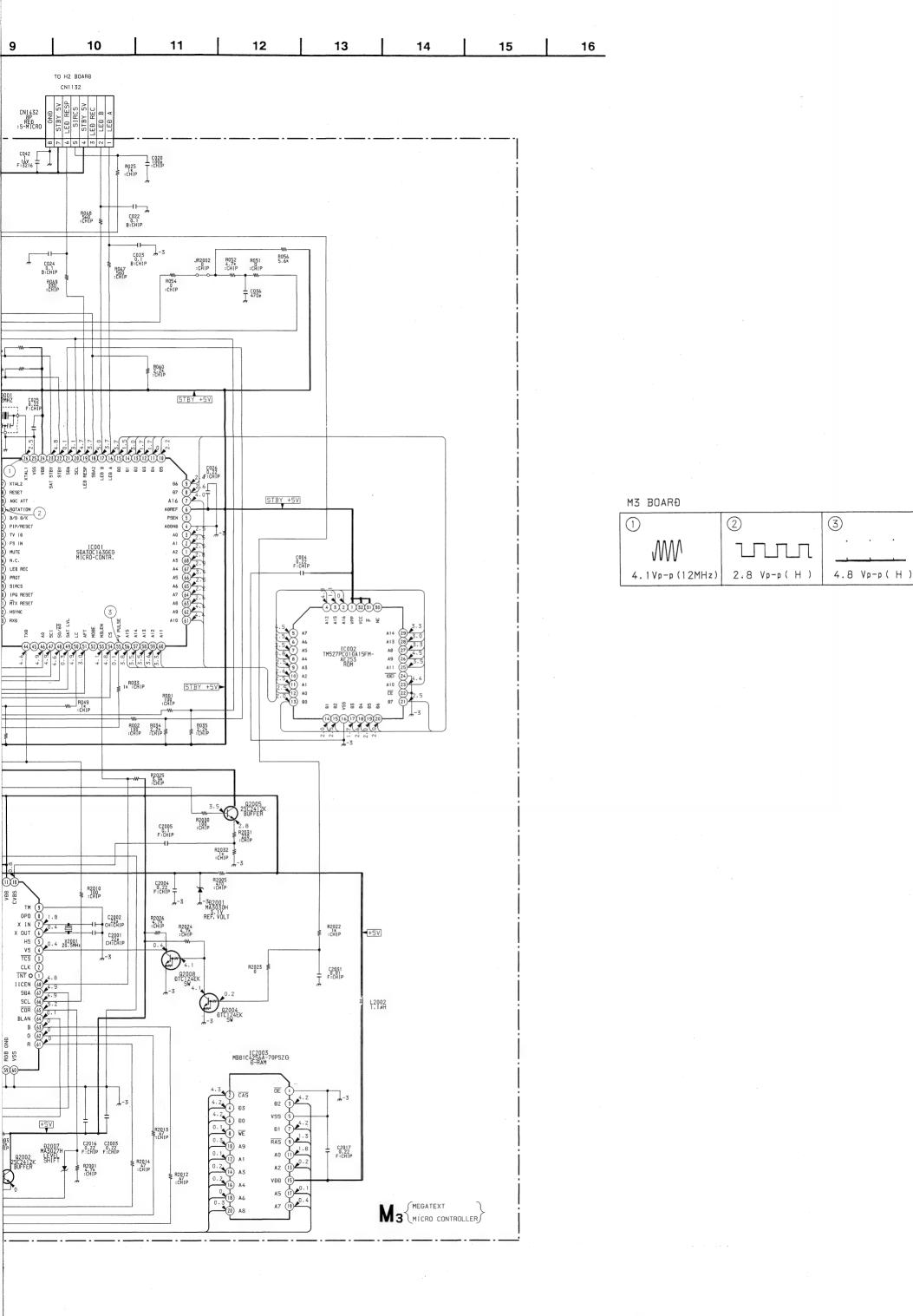


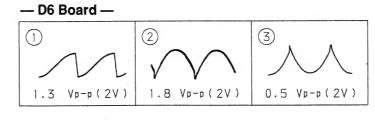
— M3 Board — <Component Side>

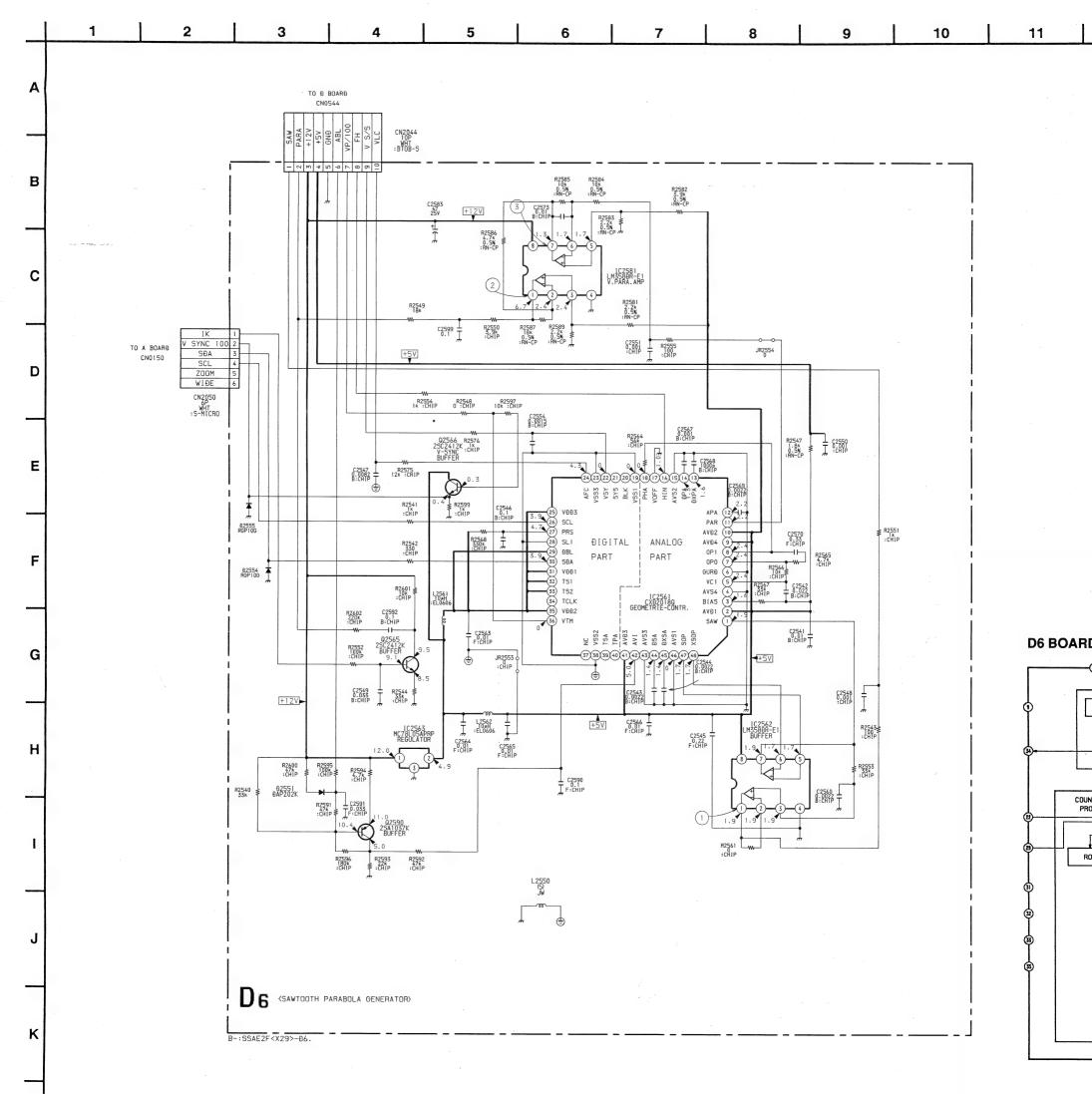


• : Pattern of the rear side.

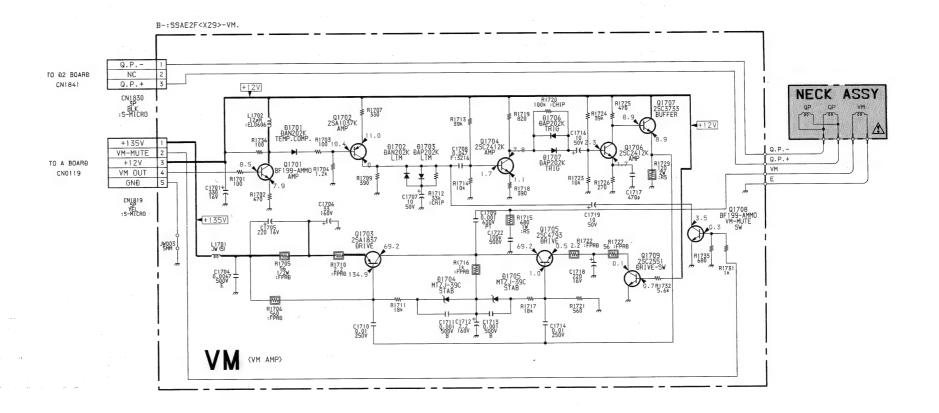


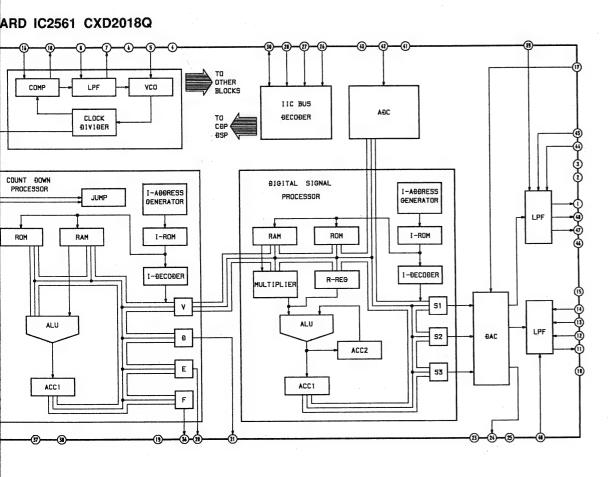






12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

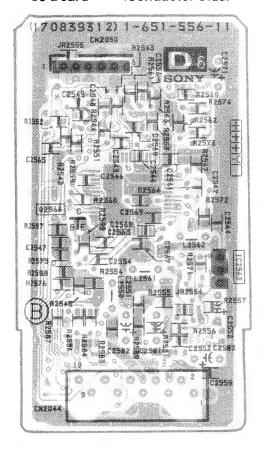




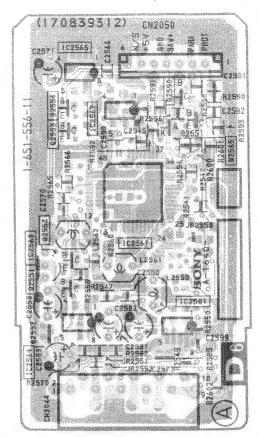




- D6 Board - < Conductor Side>

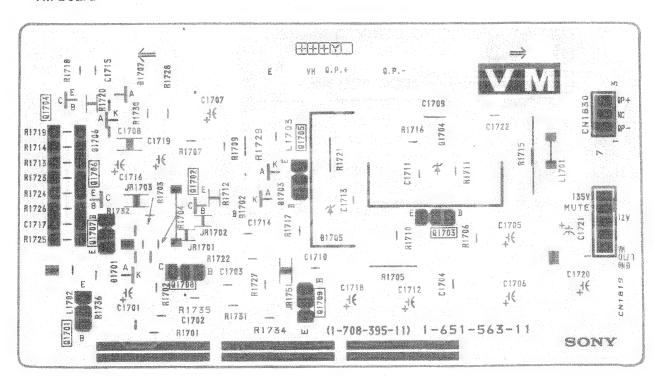


— D6 Board — < Component Side>



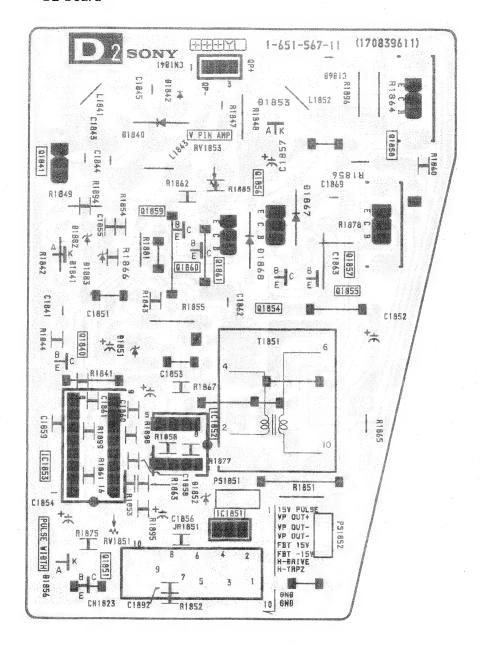
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

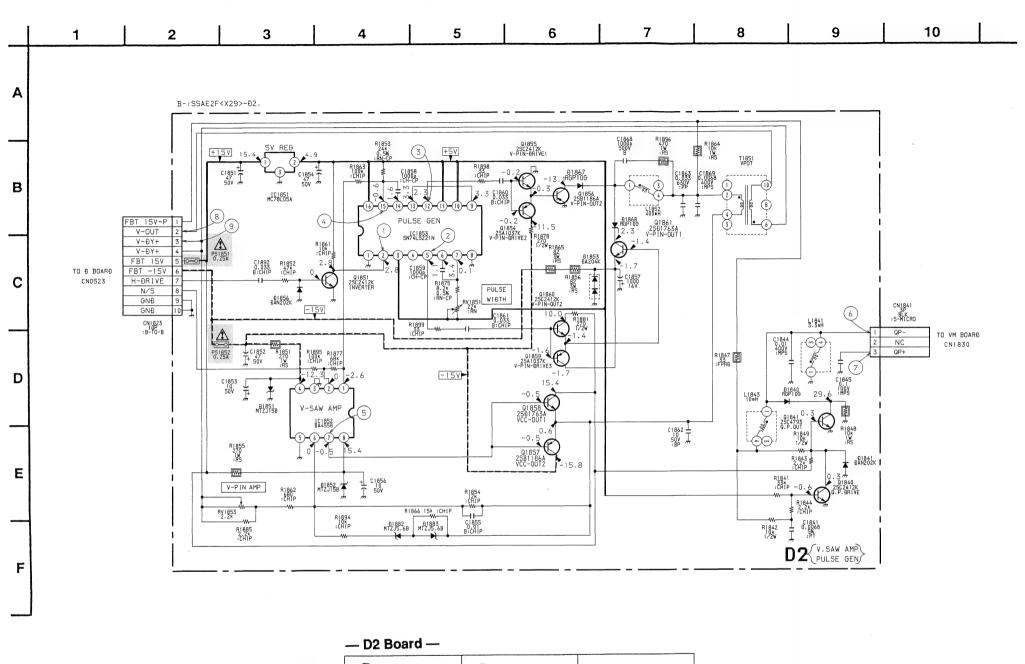
- VM Board -

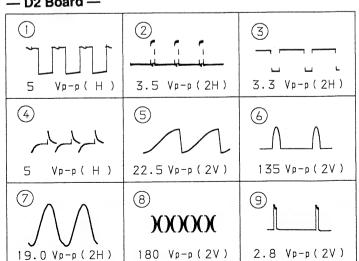


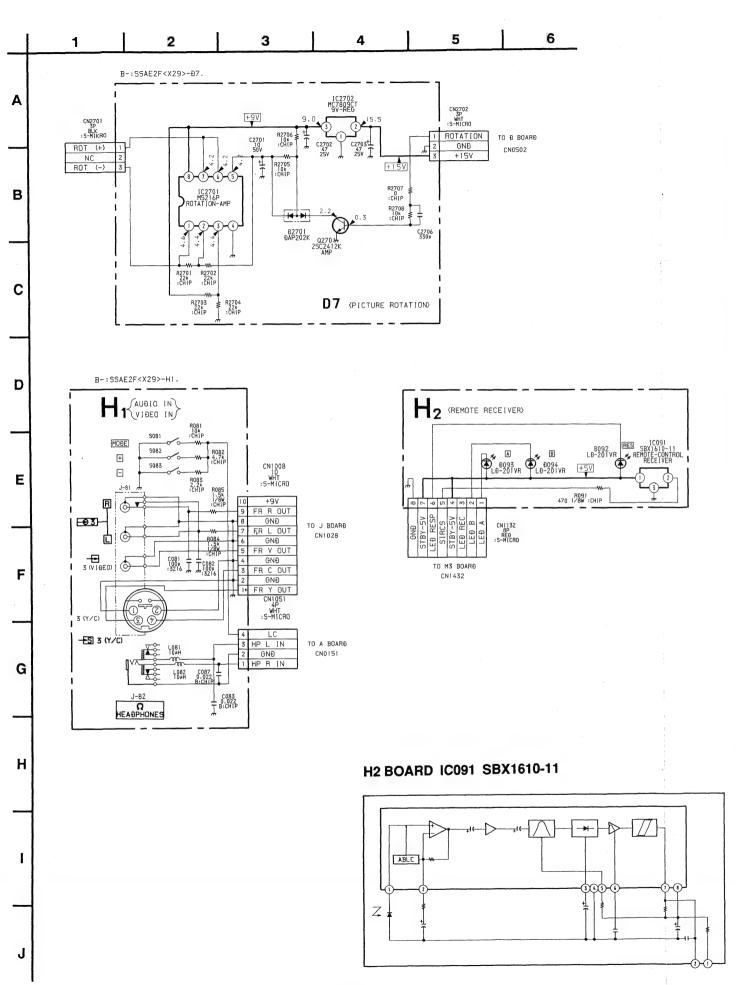


— D2 Board —



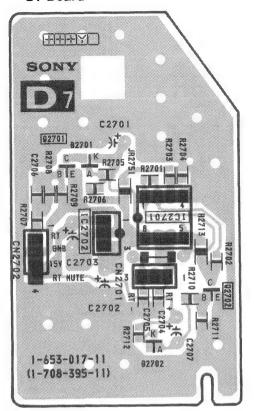




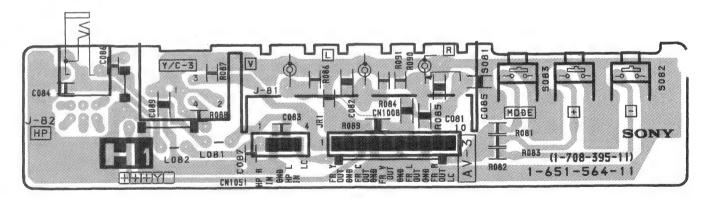




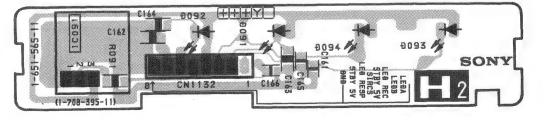
- D7 Board -

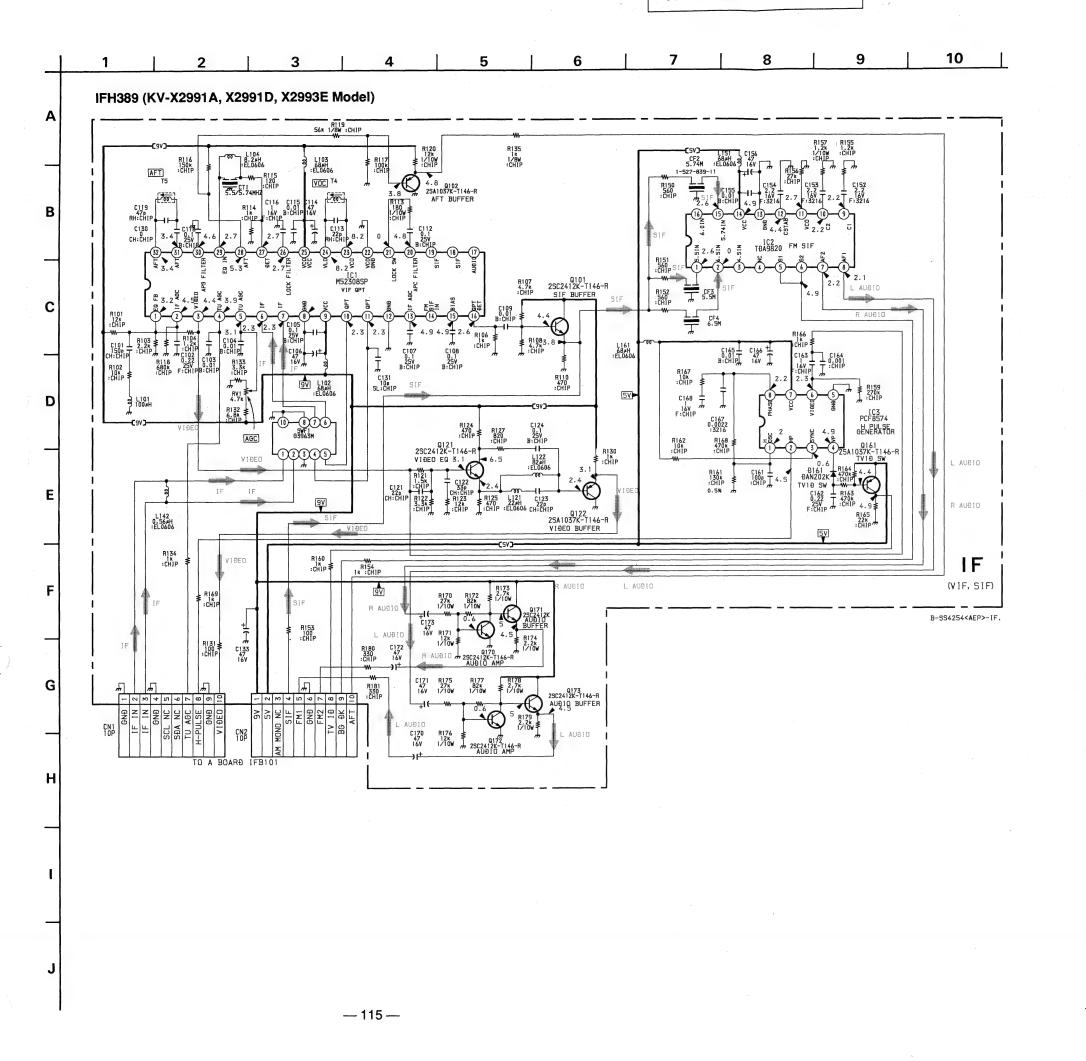


- H1 Board -



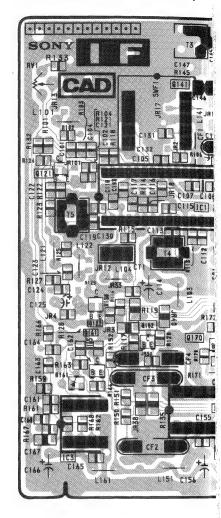
- H2 Board -



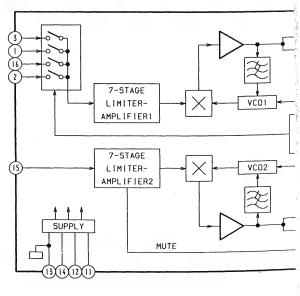




-IF BOARD- (KV-X2991A, X2



• IF BOARD IC2 TDA9820 (KV-X2991A, X2991D, X29



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. AUÐIO

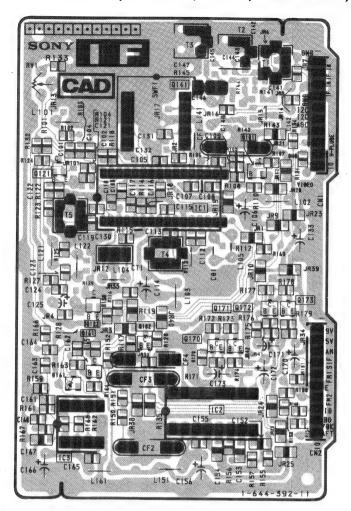
R AUÐIO

IF (VIF, SIF)

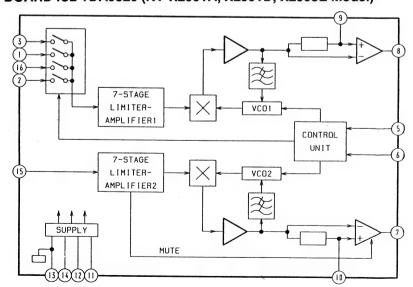
B-SS4254<AEP>-IF.

L [VIF, SIF]

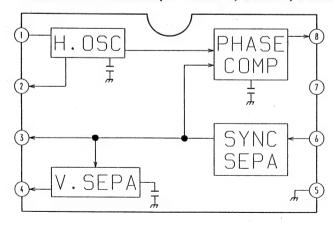
-IF BOARD- (KV-X2991A, X2991D, X2993E Model)

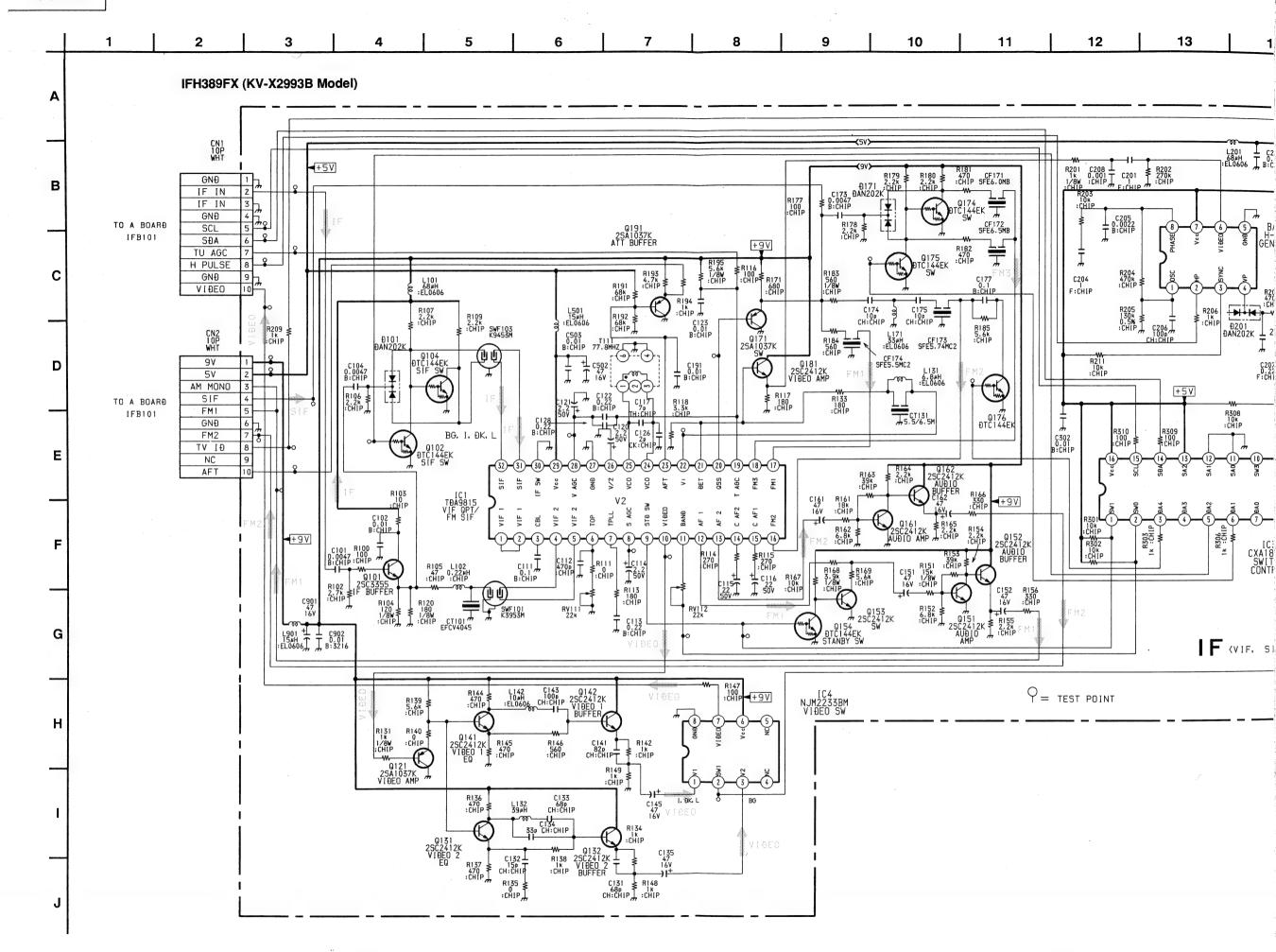


• IF BOARD IC2 TDA9820 (KV-X2991A, X2991D, X2993E Model)

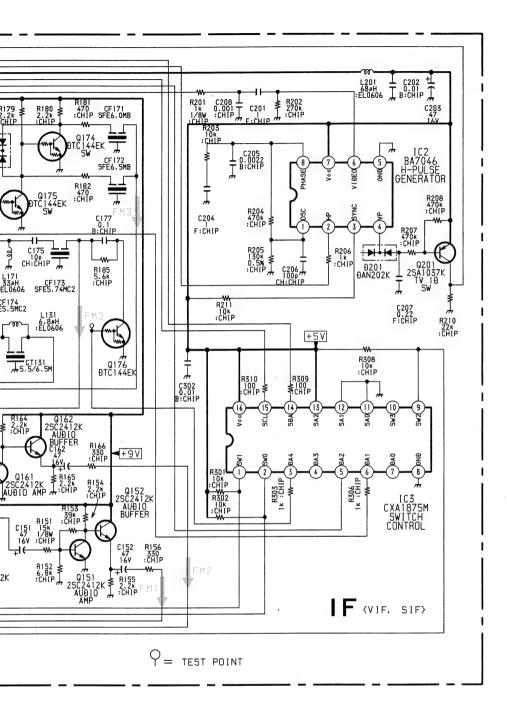


• IF BOARD IC3 BA7046 (KV-X2991A, X2991D, X2993E Model)



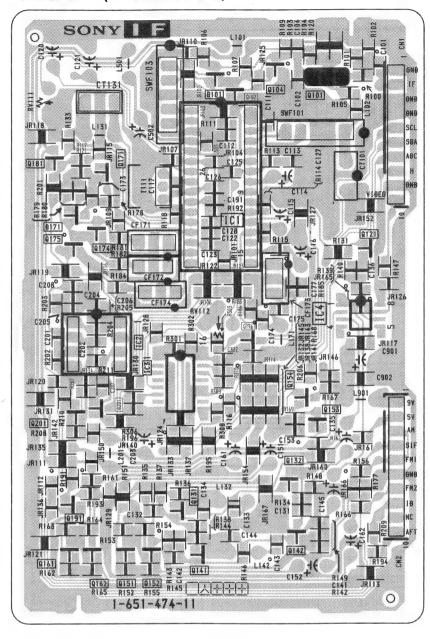


10 11 12 13 14 15





-IF BOARD- (KV-X2993B Model)

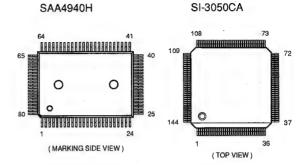


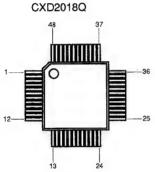
5-4. SEMICONDUCTORS

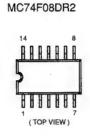
CXA1855S ,000,000,000,000,000,000,000 (TOP VIEW) CXD2018Q

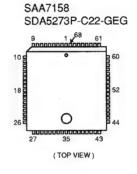
MC14046BDWR2 MC34025P MC74HC4053N YM7128

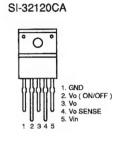


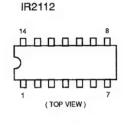




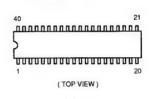




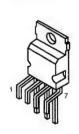






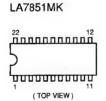


SAA728P-ZP

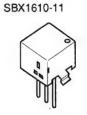


STV9379

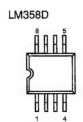
TDA2052





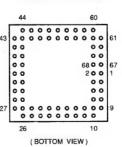




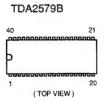


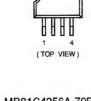


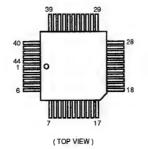
1 2 3 4

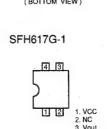


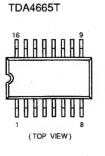
SDA30C163-2GEG

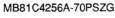


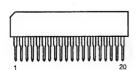


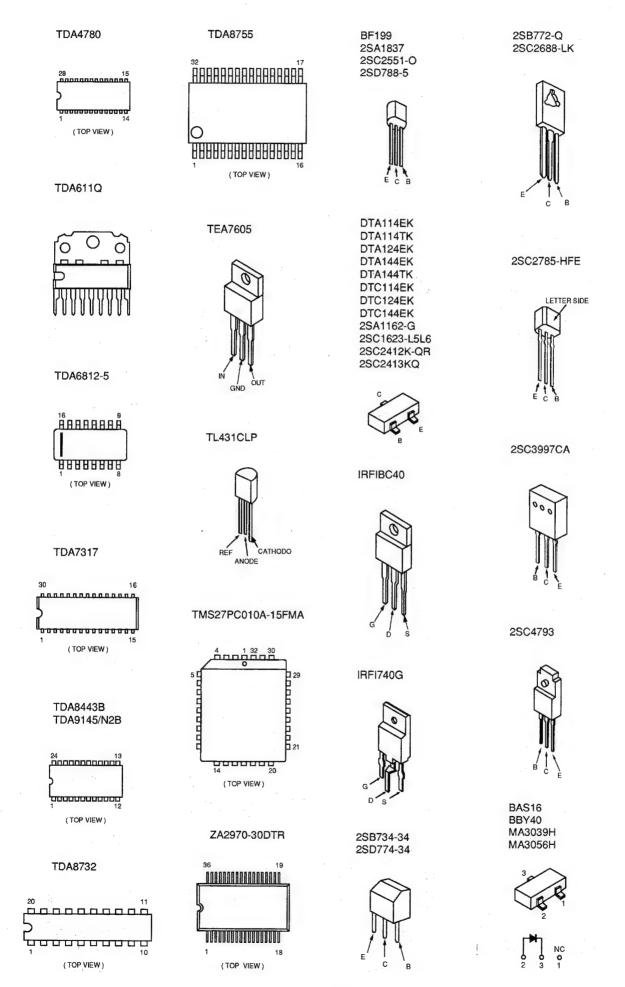






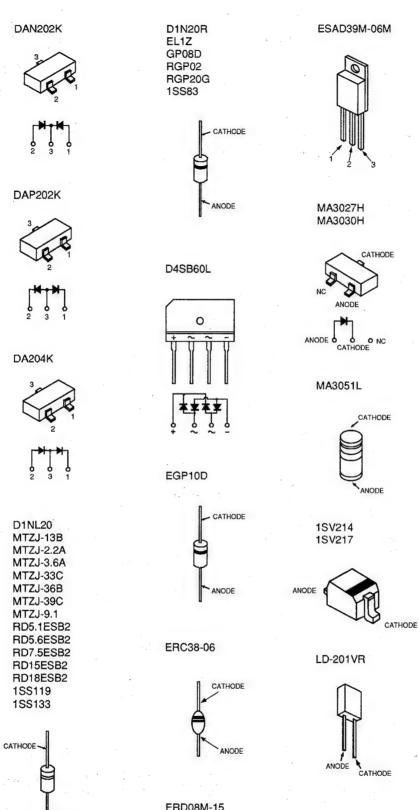






DA204K D1NL20

ANODE



SECTION 6

EXPLODED VIEWS

NOTE:

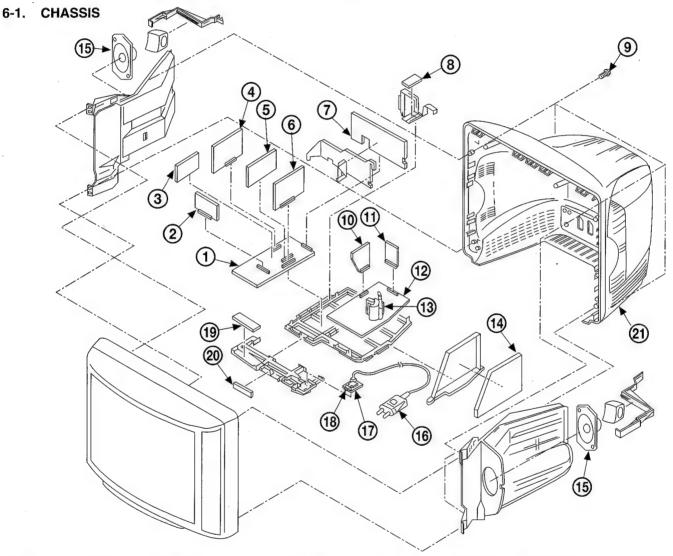
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked "* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items

The components identified by shading and marked $\hat{\Lambda}$ are critical for safety.

Replace only with the part number specified.

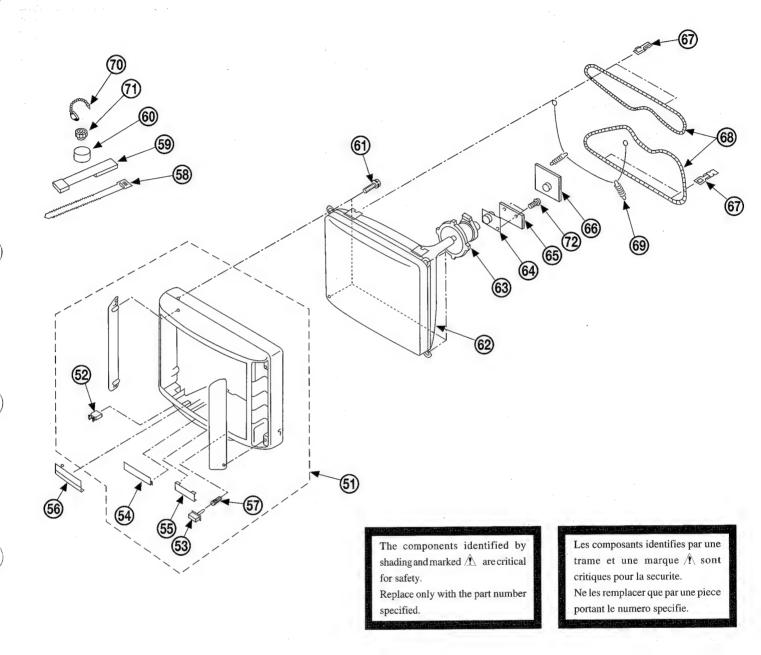
Les composants identifies par une trame et une marque \triangle sont critiques pour la securite.

Ne les remplacer que par une piece portant le numero specifie.



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	*A-1632-172-A	. A BOARD, COMPLETE		12	*A-1642-131-	A D BOARD, COMPLETE	I
		(KV-X2991A	, X2991D, X2993E)	13	± 8-598-943-0	0 TRANSFORMER ASSY,	FLYBACK
	*A-1632-237-A	. A BOARD, COMPLETE (K	V-X2993B)				(NX-2661//UB2)
2	*A-1635-018-A	M3 BOARD, COMPLETE	,	14	*A-1636-007-		Appearance of the Control of the Con
3		TUNER (UV916H)		15	1-504-507-1		
4	*A-1630-192-A			16	1-751-680-1	NOT A PART OF THE CONTRACTOR O	NOISE FILTER)
_			, X2993B, X2991D)			2.5A/250V (KV-X29	the principle of the second of the second
	*A-1630-271-A	A2 BOARD, COMPLETE (1-590-460-1		CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF
5		B BOARD, COMPLETE	/			2.5A/250V (KV-X29	
6		Q BOARD, COMPLETE		17	*A-1624-030-		
7	*A-1651-067-A			18	i 1-571-433-1	December 1970 1990 (1990	**************************************
8	*A-1640-151-A			19	*A-1646-080-	TO PRESIDENT CONTROL C	
9	4-039-358-01		TAPPING	20	*A-1646-079-		
10	*A-1642-132-A			21	X-4031-839-		
11	*A-1640-125-A				11 1001 007	, , , , , , , , , , , , , , , , , , , ,	
		,					

6-2. PICTURE TUBE



69 (M68LCT60X)
29GXC
E TUBE (NA-308)
E
TION
DISK; 15MM Ø
APPING

SECTION 7 ELECTRICAL PARTS LIST

The components identified by shading and marked $\hat{\mathcal{L}}$ are critical for safety.

Replace only with the part number specified.

Les composants identifies par une trame et une marque /\(\frac{1}{2}\) sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

 Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

 All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F: nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS

COILS

MF: mF, PF: mmF

MMH: mH, µH: mH



			•							
REF.NO.	PART NO.	DESCRIPTION		REMARK		REF.NO.	PART NO.	DESCRIPTION		<u>REMARK</u>
	*A-1621-053-A	B BOARD, COMPLETE ***********************************				C1418 C1444	1-216-295-91		1/100	
	< CAI	PACITOR >				C1451 C1452		CERAMIC CHIP 470PF CERAMIC CHIP 0.1MF	5% 10%	50V 25V
C301	1-163-038-00	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF		25V 25V		C1453 C1454	1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	10% 10%	25V 25V
C302 C303		CERAMIC CHIP 0.1MF	10%	16V		C1455	1-163-239-11	CERAMIC CHIP 33PF	5%	50V
C304		CERAMIC CHIP 0.1MF	10%	25V 50V		C1457 C1458		CERAMIC CHIP 0.47MF CERAMIC CHIP 2.2MF		25V 16V
C305	1-103-030-00	CERAMIC CHIP 13PF	5%	204		C1428	1-104-505-11	CERAMIC CRIP 2.2MF		
C306		CERAMIC CHIP 15PF	5% 10%	50V 50V		C1459 C1467	1-164-505-11 1-126-101-11	CERAMIC CHIP 2.2MF ELECT 100MF	20%	16V 16V
C307 C308		CERAMIC CHIP 0.0047MF CERAMIC CHIP 0.047MF	10%	25V	İ	C1467		CERAMIC CHIP 2.2MF	40%	16V
C309		CERAMIC CHIP 0.047MF	10%	25V	Ì	C1469		CERAMIC CHIP 2.2MF		16V
C310		CERAMIC CHIP 0.1MF	10%	25V		C1470		CERAMIC CHIP 33PF	5%	50V
C311	1-164-005-11	CERAMIC CHIP 0.47MF		25V		C1471	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C313	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	Ì	C1472	1-164-004-11		10%	25V
C314		CERAMIC CHIP 0.1MF	4.00	25V		C1473		CERAMIC CHIP 0.1MF	10%	25V
C316 C317		CERAMIC CHIP 0.001MF CERAMIC CHIP 0.47MF	10%	50V 25V		C1474 C1475		CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	10%	25V 25V
									1.00.	0.5**
C318		CERAMIC CHIP 0.47MF ELECT 47MF	20%	25V 50V	.	C1476 C1477	1-164-004-11	CERAMIC CHIP 0.1MF	10% 10%	25V 25V
C320 C321	1-124-910-11	CERAMIC CHIP 0.1MF	20%	25V		C1479	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V 25V
C325		CERAMIC CHIP 56PF	5%	50V		C1480		CERAMIC CHIP 0.1MF	10%	25V
C330		CERAMIC CHIP 0.47MF		25V		C1483		CERAMIC CHIP 0.1MF	10%	25V
C340	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V		C1487	1-126-101-11	ELECT 100MF	20%	16V
C360	1-164-005-11	CERAMIC CHIP 0.47MF		25V	- {	C1492	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C501	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V		C1493		CERAMIC CHIP 2.2MF		16V
C503 C504		CERAMIC CHIP 0.1MF CERAMIC CHIP 0.001MF	10% 10%	25V 50V		C1494 C1495	1-164-505-11 1-164-505-11			16V 16V
C304										
C505		CERAMIC CHIP 0.0015MF	10%	50V		C1496		CERAMIC CHIP 33PF	5%	50V
C506		CERAMIC CHIP 0.1MF	10% 20%	25V 16V		C1497 C1498	1-163-239-11	CERAMIC CHIP 33PF CERAMIC CHIP 33PF	5% 5%	50V 50V
C507 C508	1-126-101-11	ELECT 100MF CERAMIC CHIP 270PF	20% ·	50V		C1499		CERAMIC CHIP 33PF	5%	50V
C509	1-124-925-11	ELECT 2.2MF	20%	50V	- }	01177	1 100 100 11	Onitalia Onia		
							< CON	NECTOR >		
C510	1-124-916-11	ELECT 22MF ELECT 4.7MF	20%	50V 50V		CN302	+1 GOE 201 21	CONNECTOR, BOARD TO BOA	DD 40D	
C511 C512	1-124-927-11	CERAMIC CHIP 0.1MF	20% 10%	25V	- [CNSUZ	"1-035-301-ZI	COMMECTOR, BOARD TO BOA	KD 40F	
C512	1-163-009-11	CERAMIC CHIP 0.001MF	10%				< DIO	DE >		
C514		CERAMIC CHIP 0.1MF	10%	25V						
			4.00	0.5		D301		DIODE DAN202K		
C515		CERAMIC CHIP 0.047MF CERAMIC CHIP 0.0027MF	10% 10%	25V 50V		D304 D501		DIODE MA3051L DIODE MA3056H		
C516 C520	9-910-999-3A		10% 2%	100V		DOOT	0-113-#01-33	DIODE MV2020U		
C521	1-163-133-00	CERAMIC CHIP 470PF	5%	50V			< DEL	AY LINE >		
C530		CERAMIC CHIP 0.47MF		25V						
GE CA	1 164 005 11	CEDANTO CUID O 47ME		25V		DL301	1-415-652-11	DC (LC)		
C560	1-104-005-11	CERAMIC CHIP 0.47MF		ZOV	1					

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	REF.NO.	PART NO.	DESCRIPTION		RE	MARK	REF.NO.	PART NO.	DESCRIPTIO	N		REI	MARK
	FL1408 FL1409 FL1410	1-236-071-11	TER > ENCAPSULATED COM ENCAPSULATED COM ENCAPSULATED COM	PONENT			R342 R343 R344 R360 R365	1-216-047-00 1-216-049-00 1-216-049-00 1-216-295-91 1-216-073-00	METAL GLAZE METAL GLAZE METAL GLAZE	820 1K 1K 0 10K	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
	IC301 IC302 IC303	8-759-288-85	IC TDA9145/N2B				R370 R371 R501 R502 R503	1-216-295-91 1-216-295-91 1-216-687-11 1-216-075-00 1-216-077-00	METAL GLAZE METAL CHIP METAL GLAZE	0 0 33K 12K 15K	5% 5% 0.50% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
-	IC503 IC501 IC1406	8-759-181-19 8-759-183-36 8-759-183-36	IC TDA2579B IC TDA8443B				R506 R508 R509	1-216-073-00 1-216-073-00 1-216-081-00	METAL GLAZE	10K 10K 22K	5% 5% 5%	1/10W 1/10W 1/10W	
	101407	< COI					R510 R512	1-216-065-00 1-216-057-00		4.7K 2.2K	5% 5%	1/10W 1/10W	
	L307 L1402	1-408-405-00 1-408-418-00 < TRA	INDUCTOR 5	.7UH 6UH			R513 R514 R515 R516 R517	1-216-073-00 1-216-049-00 1-216-061-00 1-216-097-00 1-216-047-00	METAL GLAZE METAL GLAZE METAL GLAZE	10K 1K 3.3K 100K 820		1/10W 1/10W 1/10W 1/10W 1/10W	
	Q301 Q302 Q305 Q310 Q311	8-729-901-00 8-729-216-22 8-729-901-01 8-729-920-74 8-729-216-22	TRANSISTOR DTC12 TRANSISTOR DTC12 TRANSISTOR DTC14 TRANSISTOR DTC14 TRANSISTOR 2SC24 TRANSISTOR 2SA11	4EK 62-G 4EK 12K-QR 62-G			R518 R519 R520 R521 R522	1-216-049-00 1-216-067-00 1-216-009-00 1-216-051-00 1-216-049-00	METAL GLAZE	1K 5.6K 22 1.2K 1K	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
)	Q313 Q501 Q502 Q503 Q504	8-729-920-74 8-729-920-74 8-729-920-74 8-729-920-74 8-729-216-22	TRANSISTOR 2SC24 TRANSISTOR 2SC24 TRANSISTOR 2SC24 TRANSISTOR 2SC24 TRANSISTOR 2SA11	12K-QR 12K-QR 12K-QR 12K-QR 62-G			R523 R524 R525 R526 R527	1-216-041-00 1-216-061-00 1-216-095-00 1-216-097-00 1-216-073-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	470 3.3K 82K 100K 10K	5%	1/10W 1/10W 1/10W 1/10W 1/10W	
	Q505 Q506 Q507 Q510 Q519	8-729-900-53 8-729-901-04 8-729-920-74 8-729-900-53 8-729-900-80	TRANSISTOR DTA11 TRANSISTOR 2SC24 TRANSISTOR DTC11	4EK 4EK 12K-QR 4EK 4ES			R528 R529 R530 R531 R532	1-216-073-00 1-216-067-00 1-216-073-00 1-216-049-00 1-216-069-00	METAL GLAZE METAL GLAZE METAL GLAZE	10K 5.6K 10K 1K 6.8K	5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
)	Q1421 Q1422 Q1423 Q1424 Q1425	8-729-920-74 8-729-920-74 8-729-920-74 8-729-920-74	TRANSISTOR 25C24 TRANSISTOR 25C24 TRANSISTOR 25C24 TRANSISTOR 25C24	62-G 12K-QR 12K-QR			R533 R535 R550 R1416 R1418	1-216-065-00 1-216-057-00 1-216-041-00 1-216-029-00 1-216-041-00	METAL GLAZE METAL GLAZE METAL GLAZE	4.7K 2.2K 470 150 470	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
	R301 R302 R303 R304	1-216-041-00 1-216-041-00 1-216-025-00 1-216-025-00	METAL GLAZE 47 METAL GLAZE 10	0 5% 0 5% 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W		R1423 R1424 R1425 R1427 R1430	1-216-041-00 1-216-041-00 1-216-049-00 1-216-049-00 1-216-075-00	METAL GLAZE METAL GLAZE METAL GLAZE	470 470 1K 1K 12K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	274
	R306 R307 R312 R313 R316 R317	1-216-035-00 1-216-049-00 1-216-041-00 1-216-081-00 1-216-085-00 1-216-073-00	METAL GLAZE 1K METAL GLAZE 47 METAL GLAZE 22	5% 0 5% K 5% K 5%	1/10W 1/10W 1/10W 1/10W 1/10W		R1431 R1432 R1433 R1440 R1441	1-216-075-00 1-216-025-00 1-216-025-00 1-216-025-00 1-216-295-91	METAL GLAZE METAL GLAZE METAL GLAZE	12K 100 100 100	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
)	R318 R319 R320 R321 R322	1-216-041-00 1-216-041-00 1-216-025-00 1-216-039-00 1-216-041-00	METAL GLAZE 47 METAL GLAZE 47 METAL GLAZE 10 METAL GLAZE 39	0 5% 0 5% 0 5% 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W		R1442 R1443 R1444 R1449 R1450	1-216-295-91 1-216-295-91 1-216-295-91 1-216-033-00 1-216-033-00	METAL GLAZE METAL GLAZE METAL GLAZE	0 0 0 220 220	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
Í	R331 R332 R333 R340 R341	1-216-053-00 1-216-069-00 1-216-069-00 1-216-033-00 1-216-041-00	METAL GLAZE 1. METAL GLAZE 6. METAL GLAZE 22	5K 5% 8K 5% 8K 5% 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W		R1458 R1459 R1460 R1468 R1469	1-216-033-00 1-216-033-00 1-216-033-00 1-216-295-91 1-216-295-91	METAL GLAZE METAL GLAZE METAL GLAZE	220 220 220 0 0	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	



Les composants identifies par une trame et une marque 🔨 sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked 🖄 are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
R1470 R1472 R1473 R1474	1-216-049-00 1-216-033-00 1-216-033-00 1-216-033-00	METAL GLAZE 1K 5% METAL GLAZE 220 5% METAL GLAZE 220 5% METAL GLAZE 220 5%	1/10W 1/10W	C21 C22 C23	1-163-125-00 1-163-081-00 1-163-038-00	CERAMIC CHIP 220PF CERAMIC CHIP 0.22MF CERAMIC CHIP 0.1MF	5%	50V 25V 25V
R1475 R1477 R1478 R1479	1-216-295-91 1-216-022-00 1-216-022-00 1-216-022-00	METAL GLAZE 0 5% METAL GLAZE 75 5% METAL GLAZE 75 5% METAL GLAZE 75 5%	1/10W 1/10W 1/10W 1/10W	C24 C25 C26 C27 C28	1-163-038-00 1-163-038-00 1-163-038-00 1-163-038-00 1-163-038-00	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF		25V 25V 25V 25V 25V
R1480 R1486 R1487 R1489 R1490 R1494	1-216-025-00 1-216-029-00 1-216-037-00 1-216-065-00 1-216-043-00 1-216-041-00	METAL GLAZE 150 5% METAL GLAZE 330 5% METAL GLAZE 4.7K 5% METAL GLAZE 560 5% METAL GLAZE 470 5%	1/10W 1/10W 1/10W 1/10W	C29 C30 C31 C32 C33	1-163-038-00 1-163-009-11 1-163-105-00 1-124-925-11 1-124-907-11 1-163-038-00	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.001MF CERAMIC CHIP 33PF ELECT 2.2MF ELECT 10MF CERAMIC CHIP 0.1MF	10% 5% 20% 20%	25V 50V 50V 50V 50V
RV501		RIABLE RESISTOR > RES, ADJ, CERMET 4.7K		C35 C36 C37 C38	1-124-907-11 1-163-009-11 1-163-009-11 1-163-097-00	CERAMIC CHIP 0.001MF CERAMIC CHIP 0.001MF CERAMIC CHIP 15PF	20% 10% 10% 5%	50V 50V 50V 50V
X301 X302 ******	1-567-504-11 1-567-505-11	OSCILLATOR, CRYSTAL OSCILLATOR, CRYSTAL	*****	C39 C40 C41 C42 C43	1-163-097-00 1-102-963-00 1-163-038-00 1-124-907-11 1-163-038-00	CERAMIC CHIP 15PF CERAMIC 33PF CERAMIC CHIP 0.1MF ELECT 10MF CERAMIC CHIP 0.1MF	5% 5% 20%	50V 50V 25V 50V 25V
	< CON	F1 BOARD, COMPLETE ***********************************		C44 C45 C46 C47 C48	1-163-038-00 1-163-125-00 1-163-125-00 1-164-232-11 1-163-129-00	CERAMIC CHIP 0.1MF CERAMIC CHIP 220PF CERAMIC CHIP 220PF CERAMIC CHIP 0.01MF CERAMIC CHIP 330PF	5% 5% 10% 5%	25V 50V 50V 50V 50V
CN0831	* 1-695-292-11 < FUS * 1-576-232-21	FUSE (H.B.C.)	4P 5P 5A/250V	C49 C50 C51 C52 C53	1-163-038-00 1-163-014-00 1-164-232-11 1-164-004-11 1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.0027MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	10% 10% 10% 10%	25V 50V 50V 25V 25V
mestical Communication	< SWI	HOLDER, FUSE; F651 TCH > SWITCH, PUSH (AC POWER		C54 C55 C56 C57 C58	1-124-907-11 1-163-038-00 1-163-113-00 1-163-237-11 1-163-038-00	CERAMIC CHIP 0.1MF CERAMIC CHIP 68PF CERAMIC CHIP 27PF CERAMIC CHIP 0.1MF	20% 5% 5%	50V 25V 50V 50V 25V
*****	*A-1626-001-A	Q BOARD, COMPLETE ***********************************	*****	C59 C61 C62 C63 C64	1-163-113-00 1-163-129-00 1-164-232-11 1-163-809-11 1-124-927-11	CERAMIC CHIP 330PF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.047MF	5% 5% 10% 10% 20%	50V 50V 50V 25V 50V
C1 C3 C4 C5 C6	1-164-232-11 1-124-927-11 1-164-299-11 1-162-568-11 1-124-907-11	ELECT 4.7MF CERAMIC CHIP 0.22MF CERAMIC CHIP 0.33MF	10% 50V 20% 50V 10% 25V 10% 16V 20% 50V	C65 C66 C67 C68 C69	1-163-038-00 1-163-117-00 1-163-038-00 1-124-907-11 1-163-038-00	CERAMIC CHIP 0.1MF CERAMIC CHIP 100PF CERAMIC CHIP 0.1MF ELECT 10MF CERAMIC CHIP 0.1MF	5% 20%	25V 50V 25V 50V 25V
C7 C8 C10 C11 C12	1-163-077-91 1-163-038-00 1-124-927-11 1-163-125-00 1-163-125-00	CERAMIC CHIP 0.1MF	50V 25V 20% 50V 5% 50V 5% 50V	C70 C71 C72 C73 C74	1-163-117-00 1-163-129-00 1-163-038-00 1-163-014-00 1-164-232-11	CERAMIC CHIP 100PF CERAMIC CHIP 330PF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.0027MF CERAMIC CHIP 0.01MF	5% 5% 10% 10%	50V 50V 25V 50V 50V
C13 C14 C15 C17 C18	1-162-638-11 1-124-927-11 1-163-038-00 1-163-989-11 1-163-989-11	ELECT 4.7MF CERAMIC CHIP 0.1MF	16V 20% 50V 25V 10% 25V 10% 25V	C75 C82 C85 C86 C87	1-163-125-00 1-163-097-00 1-163-038-00 1-163-038-00 1-163-038-00	CERAMIC CHIP 220PF CERAMIC CHIP 15PF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF	5% 5%	50V 50V 25V 25V 25V
C19 C20	1-163-097-00 1-163-125-00		5% 50V 5% 50V	C88 C89	1-163-038-00 1-163-038-00	CERAMIC CHIP 0.1MF		25V 25V



								Q
REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C91	1-124-907-11		20%	50V	IC6	8-759-257-92	IC SAA4951	
C92 C93	1-163-038-00 1-163-038-00	CERAMIC CHIP 0.1MF		25V 25V	IC7	0_750_201_01	IC P83C652FBA-V3/AB514	
C93	1-103-030-00	CERAMIC CRIP U.IMF		234	IC8		IC NJM78L05A	
C94	1-124-916-11	ELECT 22MF	20%	50V	IC11		IC NJM78L05A	
C95	1-163-038-00	CERAMIC CHIP 0.1MF		25V	IC12		IC MC14046BDWR2	
C96	1-124-916-11		20%	50V	IC13	8-759-234-77	IC TC4S66F	
C97	1-163-038-00	CERAMIC CHIP 0.1MF		25V				
C98	1-124-916-11	ELECT 22MF	20%	50V	IC14 IC15	8-759-708-05 8-759-234-77	IC NJM78L05A	
C99	1_163_038_00	CERAMIC CHIP 0.1MF		25V	IC15		IC MC74F08DR2	
C1001	1-163-038-00			25V	IC17	8-759-257-63		
C1004	1-163-038-00	CERAMIC CHIP 0.1MF		25V	IC18		IC NJM78L05A	
C1005	1-163-038-00	CERAMIC CHIP 0.1MF		25V				
C1006	1-163-038-00	CERAMIC CHIP 0.1MF		25V	IC19	8-759-234-77		
C1007	1_163_038_00	CERAMIC CHIP 0.1MF		25V	IC20	8-759-234-77	1C TC4500F	
C1007		CERAMIC CHIP 0.1MF		25V		< COI	L >	
C1009		CERAMIC CHIP 0.1MF		25V		,		
C1012		CERAMIC CHIP 100PF	5%	50V	L1	1-410-437-11		
C1014	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	L2	1-410-437-11		
C1016	1 164 222 11	CERAMIC CHIP 0.01MF	10%	50V	L4 L5	1-408-409-00	INDUCTOR 10UH TRANSFORMER, DETECTOR	
C1016		CERAMIC CHIP 0.01MF	10%	50V	L6		TRANSFORMER, DETECTOR	
C1018	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	20	2 120 711 12	Transfer ordering purious	
C1019		CERAMIC CHIP 0.001MF	10%	50V	L7		TRANSFORMER, DETECTOR	
					L8	1-408-409-00	INDUCTOR 10UH	
	< CON	NECTOR >			L9 L10	1-408-409-00	INDUCTOR 10UH TRANSFORMER, DETECTOR	
CN2145	*1-695-301-21	CONNECTOR, BOARD TO BOA	RD 40P		L14	1-408-409-00		
	< DIO	IDE .			L15	1-408-409-00	INDUCTOR 10UH	
	\ D10	DE 7			L16	1-412-525-21		
D3	8-719-047-36	DIODE BBY40			L1001	1-410-999-11		
D4	8-719-047-37							
D5	8-719-047-37				ł	< TRA	NSISTOR >	
D6	8-719-047-37 8-719-047-36				01	8-729-216-22	TRANSISTOR 2SA1162-G	
<i>D</i> 0	0 /15 04/ 50	DIODE DDIAG			Q2		TRANSISTOR 2SC2412K-QR	
D9	8-719-047-37	DIODE BAS16			Q8		TRANSISTOR BF550	
D10	8-719-047-36				Q9		TRANSISTOR 2SC2412K-QR	
D11	8-719-047-37				Q10	8-729-025-25	TRANSISTOR BF550	
D12 D13	8-719-047-37	DIODE BASIS DIODE RD5.6M-B2			011	8-729-025-25	TRANSISTOR BF550	
DIO	0-113-103-31	DIODE RDJ.OM-B2			012		TRANSISTOR 2SA1162-G	
D15	8-719-914-43	DIODE DAN202K		•	Q13	8-729-920-74		
D16		DIODE DAN202K			Q14		TRANSISTOR 2SC2412K-QR	
	/ FFD	RITE BEAD >			Q16	8-729-216-22	TRANSISTOR 2SA1162-G	
	\ run	WITH DEAD >			Q17	8-729-901-01	TRANSISTOR DTC144EK	
FB29	1-414-234-11	INDUCTOR, FERRITE BEAD			Q18		TRANSISTOR DTC144EK	
					Q20		TRANSISTOR 2SA1162-G	
		TER >			Q21		TRANSISTOR 2SA1162-G TRANSISTOR 2SC2412K-OR	
FL1	1-239-882-11	FILTER, LOW PASS ENCAPSULATED COMPONENT			Q22	0-123-320-14	INMIDIDION ADCATION QN	
FL2	1-236-071-11	ENCAPSULATED COMPONENT			Q24	8-729-901-01	TRANSISTOR DTC144EK	
FL3	1-236-071-11	ENCAPSULATED COMPONENT						
FL4		ENCAPSULATED COMPONENT				< RES	ISTOR >	
FL5	1-230-0/1-11	ENCAPSULATED COMPONENT			JR10	1-216-025-00	METAL GLAZE 100 5%	1/10W
FL6	1-236-071-11	ENCAPSULATED COMPONENT			JR11		METAL GLAZE 100 5%	1/10W
FL8	1-236-071-11	ENCAPSULATED COMPONENT			JR12	1-414-232-21	INDUCTOR, FERRITE BEAD	
FL9	1-239-881-11	FILTER, LOW PASS			JR13		INDUCTOR, FERRITE BEAD	4 /4 0**
FL10	1-239-881-11	FILTER, LOW PASS			JR14	1-216-295-00	METAL GLAZE 0 5%	1/10W
FL11	1-239-883-11	ENCAPSULATED COMPONENT ENCAPSULATED COMPONENT FILTER, LOW PASS FILTER, LOW PASS FILTER, LOW PASS			JR15	1-216-295-00	METAL GLAZE 0 5%	1/10W
	< IC	> IC TDA8755 IC ZA2970-30DTR IC ZA2970-30DTR			JR16	1-216-295-00		1/10W
	. 20				JR17	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC1	8-759-257-59	IC TDA8755			JR18	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC2	8-759-280-77	IC ZA2970-30DTR			JR19	1-216-295-00	METAL GLAZE 0 5%	1/10W
IC3 IC4	8-759-280-77 8-759-257-61	TC SAASAGAAH			JR20	1-216-295-00	METAL GLAZE 0 5%	1/10W
103	0-133-431-01	TO DENTYTON			UNZU	T 210 277 00	U.III. U J'0	1/1011

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF,NO.	PART NO.	DESCRIPTION		REMARK	
JR21 JR22 JR23 JR24	1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00	METAL GLAZE 0 5% METAL GLAZE 0 5% METAL GLAZE 0 5% METAL GLAZE 0 5%	1/10W 1/10W 1/10W 1/10W	R67 R68 R69 R70 R71	1-216-053-00 1-216-073-00 1-216-077-00 1-216-085-00 1-216-063-00	METAL GLAZE 1.5 METAL GLAZE 10K METAL GLAZE 15K METAL GLAZE 33K METAL GLAZE 3.9	5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
JR25 JR26 JR27 JR28 JR30	1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00	METAL GLAZE 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R72 R73 R74 R75 R76	1-216-033-00 1-216-073-00 1-216-049-00 1-216-051-00 1-216-051-00			1/10W 1/10W 1/10W 1/10W 1/10W	
JR31 JR32 JR33 JR34 JR35	1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00 1-216-295-00	METAL GLAZE 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R77 R78 R79 R80 R81	1-216-067-00 1-216-037-00 1-216-049-00 1-216-047-00 1-216-051-00	METAL GLAZE 5.6 METAL GLAZE 330 METAL GLAZE 1K METAL GLAZE 820 METAL GLAZE 1.2	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
JR36 R1 R2 R3 R4	1-216-295-00 1-216-025-00 1-216-035-00 1-216-025-00 1-216-029-00	METAL GLAZE 0 5% METAL GLAZE 100 5% METAL GLAZE 270 5% METAL GLAZE 100 5% METAL GLAZE 150 5% METAL GLAZE 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W 1/10W	R83 R84 R85 R86 R87	1-216-049-00 1-216-049-00 1-216-073-00 1-216-041-00 1-216-043-00	METAL GLAZE 1K METAL GLAZE 1K METAL GLAZE 10K METAL GLAZE 470 METAL GLAZE 560	5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R5 R6 R7 R8 R12 R15	1-216-295-91 1-216-033-00 1-216-049-00 1-216-049-00 1-216-045-00 1-216-045-00	METAL GLAZE 0 5% METAL GLAZE 220 5% METAL GLAZE 1K 5% METAL GLAZE 1K 5% METAL GLAZE 680 5% METAL GLAZE 680 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R88 R89 R90 R91 R92	1-216-001-00 1-216-025-00 1-216-039-00 1-216-073-00 1-216-039-00	METAL GLAZE 10 METAL GLAZE 100 METAL GLAZE 390 METAL GLAZE 390 METAL GLAZE 390	5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R16 R18 R20 R23 R24	1-216-053-00 1-216-295-91 1-216-047-00 1-216-057-00 1-216-025-00	METAL GLAZE 1.5K 5% METAL GLAZE 0 5% METAL GLAZE 820 5% METAL GLAZE 2.2K 5% METAL GLAZE 100 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R93 R94 R95 R99 R096	1-216-039-00 1-216-025-00 1-216-025-00 1-216-025-00 1-216-295-91		5%	1/10W 1/10W 1/10W 1/10W 1/10W)
R25 R26 R27 R28 R29	1-216-045-00 1-216-025-00 1-216-025-00 1-216-001-00 1-216-085-00	METAL GLAZE 680 5% METAL GLAZE 100 5% METAL GLAZE 100 5% METAL GLAZE 10 5% METAL GLAZE 33K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R097 R1001 R1002 R1003 R1004	1-216-295-91 1-216-025-00 1-216-025-00 1-216-033-00 1-216-033-00		5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R30 R33 R34 R35 R36	1-216-295-91 1-216-057-00 1-216-065-00 1-216-049-00 1-216-065-00	METAL GLAZE 2.2K 5% METAL GLAZE 4.7K 5% METAL GLAZE 1K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R1005 R1008 R1011 R1012 R1013	1-216-025-00 1-216-295-91 1-216-057-00 1-216-057-00	METAL GLAZE 0 METAL GLAZE 2.2 METAL GLAZE 2.2	5% 5% K 5% K 5%	1/10W 1/10W 1/10W 1/10W 1/10W)
R37 R38 R40 R44 R45	1-216-001-00 1-216-033-00 1-216-053-00 1-216-065-00 1-216-073-00	METAL GLAZE 220 5% METAL GLAZE 1.5K 5% METAL GLAZE 4.7K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R1014 R1015 R1016 R1017 R1018	1-216-057-00 1-216-047-00 1-216-017-00 1-216-025-00 1-216-017-00	METAL GLAZE 820 METAL GLAZE 47 METAL GLAZE 100	5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R46 R47 R48 R49 R54	1-216-085-00 1-216-059-00 1-216-033-00 1-216-073-00 1-216-001-00	METAL GLAZE 33K 5% METAL GLAZE 2.7K 5% METAL GLAZE 220 5% METAL GLAZE 10K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	R1019 R1020 R1022 R1024 R1026	1-216-017-00 1-216-045-00 1-216-029-00 1-216-051-00 1-216-067-00	METAL GLAZE 680 METAL GLAZE 150 METAL GLAZE 1.2		1/10W 1/10W 1/10W 1/10W 1/10W	
				R1027	1-216-049-00	METAL GLAZE 1K	5%	1/10W	

R1027

R1028

R1029

R1030

R1033

R1038

R1039

R1050

R1052

R1053

1-216-049-00 METAL GLAZE 1-216-037-00 METAL GLAZE

1-216-025-00 METAL GLAZE

1-216-295-91 METAL GLAZE

1-216-053-00 METAL GLAZE

1-216-045-00 METAL GLAZE

1-216-295-91 METAL GLAZE

1-216-057-00 METAL GLAZE

1-216-057-00 METAL GLAZE

METAL GLAZE

1-216-041-00

1K

330

470

100

1.5K 5%

680

2.2K 5%

2.2K 5%

0

0

5% 5% 5%

5%

5%

5%

5%

1/10W

1/10W

1/10W

1/10W

1/10W

1/10W 1/10W

1/10W

1/10W

1/10W

4.7K

220 5%

1.5K 5%

100K

2.7K 5%

220

120K 5%

8.2K 5%

10

100

1-216-065-00 METAL GLAZE

1-216-025-00 METAL GLAZE

METAL GLAZE

METAL GLAZE

METAL GLAZE

METAL GLAZE

METAL GLAZE

METAL GLAZE

METAL GLAZE

METAL GLAZE

1-216-033-00

1-216-053-00

1-216-097-00 1-216-059-00

1-216-033-00

1-216-099-00

1-216-071-00

1-216-001-00

5%

5%

1/10W



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REF.NO.	PART NO.	DESCRIPTION	F	REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
R1054	1-216-057-00				C1136		CERAMIC CHIP 100PF	5%	50V
R1055	1-216-057-00	METAL GLAZE 2.2K			C1137	1-163-038-00		E0,	25V 50V
R1056	1-216-057-00	METAL GLAZE 2.2K			C1138 C1139	1-163-105-00 1-163-105-00		5% 5%	50V 50V
R1057 R1058	1-216-057-00 1-216-033-00	METAL GLAZE 2.2K METAL GLAZE 220	5% 1/10W 5% 1/10W		C1139	1-163-103-00	CERAMIC CHIP 100PF	5%	50V
KIUSO	1-210-033-00	MEIRO GORDE 220	5.0 1/1011		01110				
R1063	1-216-049-00	METAL GLAZE 1K	5% 1/10W		C1141	1-163-141-00	CERAMIC CHIP 0.001MI	5%	50V
R1064	1-216-295-91	METAL GLAZE 0	5% 1/10W		C1142	1-163-057-00	CERAMIC CHIP 0.0068E CERAMIC CHIP 330PF	10%	50V 50V
R1065	1-216-067-00 1-216-059-00				C1143 C1144	1-163-003-11		5%	50V
R1066 R1067	1-216-059-00	METAL GLAZE 2.7K			C1145	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
KIOO7	1 210 005 00	, VIII.							
	< CRY	STAL >			C1146 C1147	1-163-038-00 1-124-477-11		20%	25V 16V
X1	1_570_77/_11	VIBRATOR, CRYSTAL			C1147	1-164-161-11			50V
ΥT	1-2/0-//4-11	VIDIATOR, CRIDIAL			C1149	1-124-477-11	ELECT 47MF	20%	16V
*****	******	******	********	*****	C1150	1-163-038-00	CERAMIC CHIP 0.1MF		25V
	+> 4620 400 3	30 DOSDD GOMDIEME			C1151	1-163-038-00	CERAMIC CHIP 0.1MF		25V
	*A-163U-192-A	A2 BOARD, COMPLETE			C1152	1-124-477-11		20%	16V
		(KV-X2	991A, X2993B,	X2991D)	C1153	1-163-087-00	CERAMIC CHIP 4PF	0.25PH	
					C1154		CERAMIC CHIP 0.1MF	0.00	25V
	*A-1630-271-A	A2 BOARD, COMPLETE			C1155	1-124-477-11	ELECT 47MF	20%	16V
		******			C1156	1-163-009-11	CERAMIC CHIP 0.001M	10%	50V
	< CAF	ACITOR >			C1157	1-163-009-11	CERAMIC CHIP 0.001M	10%	50V
					C1158	1-163-038-00		0.00	25V
		.272 FITTED ON >			C1203 C1204	1-124-927-11 1-124-927-11		20% 20%	50V 50V
	< KV-	X2993E >			C1204	1-124-921-11	HIBCI 4.7M	20.0	301
C1101	1-126-101-11	ELECT 100MF	20%	16V	C1205	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1102	1-126-101-11			16V	C1206	1-164-004-11	CERAMIC CHIP 0.1MF	10% MF 10%	25V 50V
C1103	1-163-077-91	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF		50V 25V	C1207 C1208		CERAMIC CHIP 0.0027		50V 50V
C1104 C1105	1-164-489-11			16V	C1209	1-124-657-00	ELECT 10MF	20%	50V
								0.00	F 017
C1106	1-163-383-11			50V	C1210 C1211	1-124-907-11	ELECT 10MF CERAMIC CHIP 22PF	20% 5%	50V 50V
C1107 C1108	1-163-205-00 1-163-059-00			50V 50V	C1211	1-163-101-00	CERAMIC CHIP 22PF	5%	50V
C1108	1-163-033-00	CERAMIC CHIP 0.01M		50V	C1213	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1110	1-164-336-11			25V	C1214	1-164-182-11	CERAMIC CHIP 0.0033	MF 10%	50V
24444	1 162 000 11	OPPANTO OUTD 0 001	MF 10%	50V	C1215	1-124-910-11	ELECT 47MF	20%	50V
C1111 C1112	1-163-009-11	CERAMIC CHIP 0.001 CERAMIC CHIP 0.002		50V	C1216	1-124-927-11		20%	50V
C1112	1-124-477-11		20%	16V	C1217	1-124-927-11	ELECT 4.7MF	20%	50V
C1114	1-163-038-00	CERAMIC CHIP 0.1MF		25V	C1218	1-124-927-11		20%	50V
C1115	1-124-477-11	ELECT 47MF	20%	16V	C1219	1-124-927-11	ELECT 4.7MF	20%	50V
C1116	1-106-228-00	MYLAR 0.22M	F 10%	100V	C1220	1-124-927-11	ELECT 4.7MF	20%	50V
C1117	1-164-222-11	CERAMIC CHIP 0.22M	IF .	25V	C1221	1-124-927-11	ELECT 4.7MF	20%	50V
C1118		CERAMIC CHIP 68PF	5%	50V	C1222	1-163-014-00	CERAMIC CHIP 0.0027 CERAMIC CHIP 0.0027	MF 10% MF 10%	50V 50V
C1119 C1120	1-163-129-00 1-163-129-00			50V 50V	C1223 C1224	1-124-927-11		20%	50V
CIIZU			3 0						
C1121	1-163-113-00	CERAMIC CHIP 68PF	5%	50V	C1225	1-124-927-11 1-124-910-11	ELECT 4.7MF ELECT 47MF	20% 20%	50V 50V
C1122	1-163-081-00 1-106-228-00	CERAMIC CHIP 0.22M MYLAR 0.22M		25V 100V	C1226 C1227	1-124-910-11			50V
C1123 C1124	1-124-477-11	ELECT 47MF	20%	16V	C1228	1-163-019-00	CERAMIC CHIP 0.0068	MF 10%	50V
C1125	1-124-477-11	ELECT 47MF	20%	16V	C1230	1-126-101-11		20%	16V
			10%	25V	C1231	1-16/1-222-11	CERAMIC CHIP 0.01MF	10%	50V
C1126 C1127	1-164-004-11 1-163-038-00			25V 25V	C1231	1-126-101-11	ELECT 100MF	20%	16V
C1127	1-103-038-00	ELECT 47MF	20%	16V	C1233	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1129	1-163-038-00	CERAMIC CHIP 0.1MF	,	25V	C1234		CERAMIC CHIP 0.001M		50V
C1130	1-163-009-11	CERAMIC CHIP 0.001	MF 10%	50V	C1235	1-163-009-11	CERAMIC CHIP 0.001M	F 10%	50V
C1131	1-163-059-00	CERAMIC CHIP 0.01M	IF .	50V	C1236	1-124-927-11	ELECT 4.7MF	20%	50V
C1132		CERAMIC CHIP 0.1MF	,	50V	C1237	1-124-927-11	ELECT 4.7MF	20%	50V
C1133	1-124-907-11	ELECT 10MF	20%	50V	C1245	1-163-131-00	CERAMIC CHIP 390PF CERAMIC CHIP 390PF	10% 10%	50V 50V
C1134 C1135		CERAMIC CHIP 0.001 CERAMIC CHIP 0.1MB		50V 25V	C1246 C1247	1-163-131-00	CERAMIC CHIP 390PF	10%	50V
CIIDO	T-707-030-00	CHICARIC CHIEF U. IME		201					



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REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1251 C1252 C1253 C1254	1-163-010-11 1-163-014-00 1-163-014-00	CERAMIC CHIP 0.001MF CERAMIC CHIP 0.0012MF CERAMIC CHIP 0.0027MF CERAMIC CHIP 0.0027MF	10% 10% 10% 10%	50V 50V 50V	C2236 C2237 C2238 C2239	1-124-478-11 1-124-478-11 1-136-165-00 1-136-165-00	ELECT 100MF FILM 0.1MF	20% 25V 20% 25V 5% 50V 5% 50V
C1255	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V		< FII	TER >	
C1256 C1257	1-163-986-00	CERAMIC CHIP 0.012MF CERAMIC CHIP 0.027MF CERAMIC CHIP 0.027MF	10% 10% 10%	50V 25V 25V	BP1101	1-239-047-11	FILTER, BAND PASS (KV-X2	993E)
C1258 C1259 C1260	1-164-004-11	CERAMIC CHIP 0.027MF CERAMIC CHIP 0.1MF CERAMIC CHIP 0.12MF	10% 10% 10%	25V 25V	CF1102		TRAP, CERAMIC (5.5MHZ) (F	(V-X2993E)
C1261	1_162_000_11	CERAMIC CHIP 0.001MF	10%	50V		< CON	INECTOR >	
C1262 C1263	1-163-010-11 1-163-014-00	CERAMIC CHIP 0.0012MF CERAMIC CHIP 0.0027MF	10% 10%	50V 50V	CN2201		CONNECTOR, BOARD TO BOARD	0 40P
C1264 C1265	1-163-014-00 1-164-232-11	CERAMIC CHIP 0.0027MF CERAMIC CHIP 0.01MF	10% 10%	50V 50V		< DIC > DIC <	DDE > .201 FITTED ON >	
C1266	1-163-022-00	CERAMIC CHIP 0.012MF	10%	50V			-X2993E >	
C1267 C1268	1-163-986-00	CERAMIC CHIP 0.027MF CERAMIC CHIP 0.027MF	10% 10%	25V 25V	D1101		DIODE DAN202K	
C1269 C1270	1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.12MF	10% 10%	25V 25V	D1102 D1103 D1201	8-719-820-71	DIODE 1SV217 DIODE 1SV214 DIODE DAN202K	
C1271 C1272	1-124-916-11 1-124-910-11	ELECT 22MF ELECT 47MF	20% 20%	50V 50V	D2201	8-719-914-42	DIODE DA204K (KV-X2991A,	X-2991B, X2991D)
	∠ C2201 = C'	2239 FITTED ON >				< FER	RRITE BEAD > (KV-X2993E)	
	< KV-X2991A,	X2993B, X2991D >	0.0		FB1101 FB1104	1-410-396-41	FERRITE BEAD INDUCTOR 0.4	15UH
C2201 C2202	1-130-489-00 1-130-489-00	FILM 0.033MF	5% 5%	50V 50V	FB1105		FERRITE BEAD INDUCTOR 0.4	15UH
C2203 C2204	1-164-005-11	CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF		25V 25V		< IC	> .	
C2205	1-124-907-11	ELECT 10MF	20%	50V			C1251 FITTED ON > -X2993E >	
C2206	1-164-161-11	CERAMIC CHIP 0.0022MF FILM 0.0018MF	10% 2%	50V 100V	IC1101	8-759-511-88		
C2207 C2208	1-137-613-11 1-164-005-11	CERAMIC CHIP 0.47MF	40	25V	IC1102	8-759-184-28	IC SAA7282-ZP	
C2209 C2210		CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF		25V 25V	IC1201 IC1202 IC1203	8-759-145-58 8-759-145-58 8-759-145-58	IC μPC4558C	
C2211		CERAMIC CHIP 0.47MF		25V				
C2212 C2213 C2214	1-164-005-11 1-164-005-11 1-124-910-11	CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF ELECT 47MF	20%	25V 25V 50V	IC1204 IC1251 IC2201	8-759-503-59 8-759-257-64 8-759-267-97		X-2991B, X2991D)
C2214	1-124-910-11	ELECT 47MF	20%	50V	IC2202		IC TDA2822M (KV-X2991A,	
C2216		CERAMIC CHIP 0.0068MF CERAMIC CHIP 0.0068MF	10% 10%	50V 50V		< CO:	IL >	
C2217 C2218 C2219	1-163-809-11 1-163-809-11	CERAMIC CHIP 0.047MF CERAMIC CHIP 0.047MF	10% 10%	25V 25V			1251 FITTED ON > -X2993E >	
C2220	1-124-925-11		20%	50V	L1101	1-408-405-00		
C2221 C2222	1-124-925-11	ELECT 2.2MF CERAMIC CHIP 0.47MF	20%	50V 16V	L1102 L1103	1-408-405-00 1-410-119-11		
C2223	1-164-005-11	CERAMIC CHIP 0.47MF		16V	L1104	1-410-119-11	INDUCTOR 1MMH	
C2224 C2225		CERAMIC CHIP 0.47MF CERAMIC CHIP 0.47MF		16V 16V	L1201	1-408-421-00 1-408-421-00		
C2226		CERAMIC CHIP 0.0015MF	10%	50V	L1251	1-408-421-00	INDUCTOR 100UH	
C2227 C2228	1-163-011-11 1-124-925-11	CERAMIC CHIP 0.0015MF ELECT 2.2MF	10% 20%	50V 50V	L2201	1-407-500-00		-2991B, X2991D)
C2229 C2230	1-124-925-11 1-136-177-00	ELECT 2.2MF	20% 5%	50V 50V		< TR	ANSISTOR > (KV-X2993E)	
C2231	1-136-177-00	FILM 1MF	5%	50V	Q1101		TRANSISTOR 2SC2412K-QR	
C2232 C2233	1-164-182-11	CERAMIC CHIP 0.0033MF CERAMIC CHIP 680PF	10% 10%	50V 50V	Q1102 Q1103		TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR	
C2234	1-124-907-11	ELECT 10MF	20%	50V	Q1104	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C2235	1-124-907-11	ELECT 10MF	20%	50V	Q1105	8-729-920-74	TRANSISTOR 2SC2412K-QR	

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REF.NO.	PART NO.	DESCRIPTIO	<u>N</u>	REMARK	REF.NO.	PART NO.	DESCRIPTIO	N		REN	MARK
Q1106 Q1107 Q1108 Q1201 Q1202	8-729-920-74 8-729-920-74 8-729-920-74 8-729-920-74 8-729-920-74	TRANSISTOR 25 TRANSISTOR 25 TRANSISTOR 25	SC2412K-QR SC2412K-QR SC2412K-QR		R1127 R1128 R1129 R1130	1-216-097-00 1-216-089-91 1-216-089-91 1-216-097-00	METAL GLAZE	100K 47K 47K 100K	5% 5% 5%	1/10W 1/10W 1/10W 1/10W	
Q1251 Q1252	8-729-901-01 8-729-901-01	TRANSISTOR D	rc144ek		R1131 R1132 R1133 R1134 R1135	1-216-069-00 1-216-097-00 1-216-089-91 1-216-212-00 1-216-081-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	6.8K 100K 47K 3.9K 22K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/8W 1/10W	
	< RES	SISTOR >			KIISS	1-210-001-00	MEIAU GUAZE	221	J*0	1/100	
JR1101 JR2201 JR2202	1-216-296-91 1-216-295-91 1-216-295-91	METAL GLAZE	0 5% 0 5% KV-X2991A, 0 5%	1/10W X-2991B, X2991D)	R1136 R1137 R1138 R1139	1-216-081-00 1-216-095-00 1-216-097-00 1-216-005-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	22K 82K 100K 15	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W	
UK2202	1 210 255 51	(1		X-2991B, X2991D)	R1140	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
JR2203	1-216-295-91	METAL GLAZE	0 5% KV-X2991A,	1/10W X-2991B, X2991D)	R1141 R1142	1-216-061-00 1-216-033-00	METAL GLAZE METAL GLAZE	3.3K 220	5% 5%	1/10W 1/10W	
JR2204 JR2205	1-216-295-91	(1	0 5% KV-X2991A, 0 5%	X-2991B, X2991D)	R1143 R1144 R1145	1-216-049-00 1-216-049-00 1-216-025-00	METAL GLAZE METAL GLAZE METAL GLAZE	1K 1K 100	5% 5% 5%	1/10W 1/10W 1/10W	
					R1146	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
JR2206 JR2207	1-216-295-91 1-216-296-91		0 5% 0 5%	1/8W	R1147	1-216-045-00	METAL GLAZE	680	5%	1/10W	
JR2208	1-216-295-91	METAL GLAZE	0 5%		R1148 R1149	1-216-049-00 1-216-025-00	METAL GLAZE	1K 100	5% 5%	1/10W 1/10W	
JR2209 JR2210	1-216-295-91 1-216-295-91	METAL GLAZE METAL GLAZE	0 5% 0 5%		R1149	1-216-025-00	METAL GLAZE	680	5%	1/10W	
			0 50	1/10W	R1151	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
JR2211 JR2212	1-216-295-91 1-216-296-91	METAL GLAZE	0 5% 0 5%		R1152	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
JR2213	1-216-295-91	METAL GLAZE	0 5%	1/10W	R1153	1-216-049-00		1K	5%	1/10W	
JR2214 JR2215	1-216-296-91 1-216-296-91	METAL GLAZE METAL GLAZE	0 5% 0 5%		R1154 R1201	1-216-041-00 1-216-103-91	METAL GLAZE METAL GLAZE	470 180K	5% 5%	1/10W 1/10W	
JR2216	1-216-295-91		0 5%		R1202	1-216-107-00		270K	5%	1/10W	
JR2217	1-216-296-91	METAL GLAZE	0 5%	1/8W	R1203 R1204	1-216-073-00 1-216-083-00		10K 27K	5% 5%	1/10W 1/10W	
	< R1101 - R1	1290 FITTED ON	>		R1205	1-216-103-91	METAL GLAZE	180K	5%	1/10W	
	< KV-	-X2993E >			R1206	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R1101	1-216-039-00	METAL GLAZE	390 5%	1/10W	R1207	1-216-073-00		10K	5%	1/10W	
R1102	1-216-049-00	METAL GLAZE	1K 5%		R1208	1-216-083-00		27K 27K	5% 5%	1/10W 1/10W	
R1103 R1104	1-216-049-00 1-216-041-00	METAL GLAZE METAL GLAZE	1K 5% 470 5%		R1209 R1210	1-216-083-00 1-216-073-00	METAL GLAZE	10K	5%	1/10W 1/10W	
R1105	1-216-005-00	METAL GLAZE	15 5%		R1211	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1106	1-216-036-00		300 5%		R1212	1-216-073-00		10K	5%	1/10W	
R1107	1-216-042-00 1-216-063-00		510 5% 3.9K 5%		R1213 R1214	1-216-073-00 1-216-073-00		10K 10K	5% 5%	1/10W 1/10W	
R1108 R1109	1-216-053-00		1.5K 5%		R1215	1-216-089-91		47K	5%	1/10W	
R1110	1-216-047-00	METAL GLAZE	820 5%	1/10W	R1216	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1111	1-216-041-00		470 5%		R1217	1-216-073-00		10K	5%	1/10W	
R1112	1-216-051-00		1.2K 5% 10 5%		R1218 R1219	1-216-121-00 1-216-113-00	METAL GLAZE	1M 470K	5% 5%	1/10W 1/10W	
R1113 R1114	1-216-001-00 1-216-105-00		10 5% 220K 5%		R1220	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1115	1-216-121-00		1M 5%		R1221	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1116	1-216-049-00		1K 5%		R1222	1-216-073-00	METAL GLAZE	10K 10K	5% 5%	1/10W 1/10W	
R1117 R1118	1-216-097-00 1-216-097-00		100K 5%		R1223 R1224	1-216-073-00 1-216-073-00	METAL GLAZE	10K	5%	1/10W 1/10W	
R1119	1-216-073-00		10K 5%		R1225	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1120	1-216-083-00		27K 5%	6 1/10W	R1226	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1121	1-216-081-00		22K 5%		R1227	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R1122	1-216-158-00		22 59 22 59		R1228 R1229	1-216-073-00 1-216-073-00		10K 10K	5% 5%	1/10W 1/10W	
R1123 R1124	1-216-158-00 1-216-089-91		47K 59		R1229	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1125	1-216-097-00		100K 59		R1231	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1126	1-216-069-00	METAL GLAZE	6.8K 59	6 1/10W	R1232	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

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REF.NO.	PART NO.	DESCRIPTIO	<u>N</u>		REMARK	_	REF.NO.	PART NO.	DESCRIPTION		REMARK
R1233 R1234 R1235	1-216-049-00 1-216-049-00 1-216-073-00	METAL GLAZE METAL GLAZE METAL GLAZE	1K 1K 10K 10K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W		R2220 R2221	1-216-065-00 1-216-091-00	METAL GLAZE 4.7K 5' METAL GLAZE 56K 5' STAL > (KV-X2993E)		
R1236	1-216-073-00	METAL GLAZE		5%	1/10W		X1101	1-579-689-21			
R1237 R1238 R1240 R1241 R1242	1-216-049-00 1-216-065-00 1-216-025-00 1-216-025-00 1-216-025-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	1K 4.7K 100 100 100	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W		X1102 X1201	1-579-282-21 1-567-307-11	VIBRATOR, CRYSTAL OSCILLATOR, CRYSTAL	*****	*****
R1243 R1245 R1246 R1247 R1251	1-216-025-00 1-216-073-00 1-216-073-00 1-216-073-00 1-216-089-91	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	100 10K 10K 10K 47K	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W				A BOARD, COMPLETE ************ (KV-X2991A A BOARD, COMPLETE (KV		X2993E)
R1252 R1253	1-216-065-00 1-216-089-91	METAL GLAZE METAL GLAZE	4.7K 47K	5% 5%	1/10W 1/10W			< CA	**************************************		
R1254	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		2074			0.00.	1.017
R1255 R1256 R1257 R1258	1-216-089-91 1-216-065-00 1-216-089-91 1-216-065-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	47K 4.7K 47K 4.7K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W		C071 C072 C073 C074 C103	1-126-803-11 1-124-120-11 1-126-101-11 1-163-001-11 1-163-031-11	ELECT 47MF ELECT 220MF ELECT 100MF CERAMIC CHIP 220PF CERAMIC CHIP 0.01MF	20% 20% 20% 10%	10V 16V 16V 50V 50V
R1259 R1260	1-216-089-91 1-216-065-00	METAL GLAZE METAL GLAZE	47K 4.7K	5% 5%	1/10W 1/10W		C104	1-124-910-11	ELECT 47MF	20%	50V
R1261	1-216-089-91	METAL GLAZE	47K	5%	1/10W		C105 C106	1-124-916-11 1-124-927-11	ELECT 22MF ELECT 4.7MF	20% 20%	50V 50V
R1262 R1263	1-216-065-00 1-216-089-91	METAL GLAZE METAL GLAZE	4.7K 47K 4.7K	5% 5% 5%	1/10W 1/10W 1/10W	-	C110 C120	1-164-005-11 1-163-031-11	CERAMIC CHIP 0.47MF CERAMIC CHIP 0.01MF		25V 50V
R1264 R1265	1-216-065-00 1-216-089-91	METAL GLAZE	4.7K 4.7K	5% 5%	1/10W		C125 C208	1-126-101-11 1-164-005-11	ELECT 100MF CERAMIC CHIP 0.47MF	20%	16V 25V
R1266	1-216-065-00	METAL GLAZE			1/10W		C217	1-124-925-11	ELECT 2.2MF	20%	50V 50V
R1267 R1268	1-216-089-91 1-216-065-00	METAL GLAZE METAL GLAZE	47K 4.7K	5% 5%	1/10W 1/10W		C218 C231	1-124-925-11 1-164-346-11	ELECT 2.2MF CERAMIC CHIP 1MF	20%	16V
R1269 R1270	1-216-089-91 1-216-065-00	METAL GLAZE METAL GLAZE	47K 4.7K	5% 5%	1/10W 1/10W		C232	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
R1271	1-216-025-00	METAL GLAZE	100	5%	1/10W		C233 C234	1-163-009-11 1-163-005-11	CERAMIC CHIP 0.001MF CERAMIC CHIP 470PF	10% 10%	50V 50V
R1272 R1290	1-216-025-00 1-216-049-00	METAL GLAZE METAL GLAZE	100 1K	5% 5%	1/10W 1/10W		C235 C236	1-130-772-00 1-124-618-11	FILM 0.22MF	5% 20%	63V 35V
, K	< L1101 - L1 V-X-2991A, X299	251 FITTED ON					C237 C238	1-124-618-11 1-163-005-11	ELECT 2200MF CERAMIC CHIP 470PF	20% 10%	35V 50V
					. 4 /1 017		C239 C240	1-130-772-00 1-124-916-11	FILM 0.22MF	5% 20%	63V 50V
R2201 R2202 R2203	1-216-661-11 1-216-662-11 1-216-661-11	METAL CHIP	3K	0.509	6 1/10W 6 1/10W 6 1/10W		C241	1-124-916-11		20%	50V
R2204	1-216-662-11	METAL CHIP	3K	0.509	6 1/10W		C242	1-124-903-11		20%	50V
R2205 R2206	1-216-067-00 1-216-071-00	METAL GLAZE	5.6K 8.2K		1/10W 1/10W		C244 C248 C249	1-164-222-11 1-163-185-00 1-163-129-00		5% 5%	25V 50V 50V
		METAL GLAZE	22K	5%	(KV-X2993E) 1/10W)	C250	1-124-478-11		20%	25V
D000E		(K)	7-X2991	A, X-2	2991B, X2991D))	C280	1-126-320-11		20%	16V 16V
R2207	1-216-057-00		2.2K	5%	1/10W		C290 C682	1-126-101-11		20%	16V
R2208	1-216-071-00		8.2K		1/10W (KV-X2993E))	C683 C684	1-124-478-11 1-126-101-11		20% 20%	25V 16V
	1-216-081-00	METAL GLAZE (KY			1/10W 2991B, X2991D))	C685	1-124-478-11		20%	25V
R2209	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W		C1351 C1352	1-164-346-11 1-164-346-11			16V 16V
R2210 R2211	1-216-025-00 1-216-025-00	METAL GLAZE	100	5% 5%	1/10W 1/10W 1/10W		C1353 C1356	1-164-346-11 1-163-038-00			16V 25V
R2216 R2217 R2218	1-216-295-91 1-216-295-91 1-249-389-11	METAL GLAZE	0 0 4.7	5% 5% 5%	1/10W 1/10W 1/4W F		C1357 C1358 C1359		ELECT 220MF CERAMIC CHIP 0.022MF CERAMIC CHIP 0.022MF	20% 10% 10%	16V 25V 25V

C1360

1/4W F

1-124-120-11 ELECT 220MF 1-163-037-11 CERAMIC CHIP 0.022MF 1-164-005-11 CERAMIC CHIP 0.47MF

25V 25V

4.7

R2219

1-249-389-11 CARBON

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REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1362	1-124-927-11	ELECT 4.7MF	20%	50V	D211	8-719-901-33	DIODE 1SS133T	
C1363 C1364	1-164-004-11 1-163-809-11			25V 25V	D212 D213 D215	8-719-901-33 8-719-914-43 8-719-914-42		
C1365 C1366	1-164-004-11 1-163-809-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.047MF	10% 10%	25V 25V	D216 D314	8-719-914-42	DIODE DA204K DIODE DAN204K	
C1368		(KV-X2991A CERAMIC CHIP 0.1MF	10%	25V	D681 D682	8-719-110-03	DIODE DAP202K DIODE RD7.5ESB2	
C1370 C1372	1-163-809-11	(KV-X2991A CERAMIC CHIP 0.01MF		25V X2993E) 50V	D683 D1351 D1352	8-719-109-89 8-719-901-33 8-719-914-43		
C1373	1-164-336-11 1-124-903-11	CERAMIC CHIP 0.33MF	20%	25V 50V	D1353 D1354	8-719-914-43 8-719-914-43	DIODE DAN202K DIODE DAN202K	
C1375 C1376 C1378 C1379	1-164-232-11 1-164-004-11 1-163-007-11	CERAMIC CHIP 0.01MF CERAMIC CHIP 0.1MF CERAMIC CHIP 680PF CERAMIC CHIP 0.1MF	10% 10% 10% 10%	50V 25V 50V 25V	D1355 D1356	8-719-914-43 8-719-914-43	DIODE DAN202K DIODE DAN202K (KV-X2991A	, X2991D, X2993E)
C1380 C1381 C1382	1-124-903-11 1-164-232-11	CERAMIC CHIP 0.01MF ELECT 1MF CERAMIC CHIP 0.01MF CERAMIC CHIP 33PF	10% 20% 10% 5%	50V 50V 50V 50V	D1357 D1358 D1359	8-719-914-43 8-719-914-43 8-719-914-43	DIODE DAN202K DIODE DAN202K	
C1383 C1384		CERAMIC CHIP 0.022MF		25V	70070			
C1385 C1386 C1387	1-164-232-11 1-164-232-11	CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 0.01MF CERAMIC CHIP 220PF	10% 10% 10% 10%	50V 50V 50V 50V	IC072 IC251	8-759-072-99 4-201-023-01	IC ST24C16CB1 IC TDA2052 SPACER, INSULATING; SPRING, IC; IC251	IC251
C1390		NNECTOR >	10.0	307	IC261		IC TDA2052 SPACER, INSULATING; SPRING, IC; IC261	IC261
CN0001 CN0101 CN0102		PLUG, CONNECTOR 5P CONNECTOR, BOARD TO CONNECTOR, BOARD TO	BOARD 40P		IC681	8-749-921-21	IC SI-3120CA SCREW (M3X10), P, SW	(+)
CN0102 CN0103 CN0104	*1-564-513-11	PLUG, CONNECTOR 10P PLUG, CONNECTOR 8P	DONNU 401		IC682 IC684	4-382-854-11	IC SI-3050CA SCREW (M3X10), P, SW IC NJM78M09FA	(+)
CN0105 CN0106	*1-568-880-51	PIN, CONNECTOR 7P PIN, CONNECTOR 5P (K	(V-X2993B)		IC685		SPRING, TRANSISTOR	
CN0107 CN0109 CN0110	1-695-298-11 *1-568-882-51	PIN, CONNECTOR 4P CONNECTOR, BOARD TO PIN, CONNECTOR 7P			IC1351 IC1352 IC1353	8-759-007-21 8-759-145-58		
CN0113 CN0119 CN0145	*1-568-880-51 1-695-298-11	CONNECTOR, BOARD TO PIN, CONNECTOR 5P CONNECTOR, BOARD TO			IC1354	8-759-103-93 < IF	BLOCK >	
CN0146 CN0150	*1-564-514-11 *1-568-881-51	PLUG, CONNECTOR 11P PIN, CONNECTOR 6P	•		IFB101	1-466-733-11	IF BLOCK (IFH-389)	
CN0151		PIN, CONNECTOR 4P			IFB101	1-466-735-11	(KV-X2991A IF BLOCK (IFH-389FX)	, X2991D, X2993E) (KV-X2993B)
	< DIC	ODE >				< CO1	IL >	
D068 D069 D071 D073 D075	8-719-914-44 8-719-109-89 8-719-109-89	DIODE DAP202K DIODE DAP202K DIODE RD5.6ESB2 DIODE RD5.6ESB2 DIODE DAN202K			L101 L105 L1351 L1352 L1353	1-412-546-41 1-412-546-41 1-216-295-91 1-216-295-91 1-408-403-00	INDUCTOR 560UH METAL GLAZE 0 METAL GLAZE 0	5% 1/10W 5% 1/10W
D077 D078	8-719-914-43 8-719-109-89	DIODE DAN202K DIODE RD5.6ESB2			L1354 L1355	1-408-403-00 1-408-403-00		
D079 D101 D206	8-719-109-89	DIODE RD5.6ESB2 DIODE MTZJ-33C					ANSISTOR >	
D207 D208 D209 D210	8-719-901-33 8-719-901-33 8-719-901-33	DIODE 1SS133T DIODE 1SS133T DIODE 1SS133T DIODE 1SS133T			Q071 Q101 Q102 Q103 Q106	8-729-216-22 8-729-901-00 8-729-901-00	TRANSISTOR DTC124EK TRANSISTOR 2SA1162-G TRANSISTOR DTC124EK TRANSISTOR DTC124EK TRANSISTOR 2SC2412K-	



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REF.NO.	PART NO.	DESCRIPTION	<u> </u>		REMARK	REF.NO.	PART NO.	DESCRIPTION	<u>N</u>		REMARK	
Q107 Q108 Q201	8-729-216-22 8-729-920-74	TRANSISTOR 2S	A1162-G C2412K-	QR		R119 R123	1-216-025-00 1-216-295-91	METAL GLAZE	100	5% 5%	1/10W 1/10W	
Q202 Q203		TRANSISTOR 2S				R201 R202 R210	1-216-295-91 1-216-295-91 1-247-734-11	METAL GLAZE	0 0 39	5% 5% 5%	1/10W 1/10W 1/2W	
Q204 Q205 Q206		TRANSISTOR 2S	A1162-G A1162-G	}		R211 R212	1-247-734-11 1-216-049-00	CARBON METAL GLAZE	39 1K	5% 5%	1/2W 1/10W	
Q207 Q209	8-729-216-22	TRANSISTOR 2S	A1162-G	3		R213 R214 R215 R216	1-216-073-00 1-216-049-00 1-216-073-00 1-216-049-00	METAL GLAZE METAL GLAZE	10K 1K 10K 1K	5% 5% 5%	1/10W 1/10W 1/10W 1/10W	
Q210 Q317 Q681 Q682	8-729-920-74 8-729-140-96	TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S	C2412K- D774-34	·QR L		R217 R218	1-216-043-00	METAL GLAZE	560 22K	5% 5%	1/10W 1/10W	
Q683	8-729-216-22	TRANSISTOR 2S	A1162-G	3		R221 R222	1-211-771-11 1-216-049-00	FUSIBLE METAL GLAZE	4.7 1K	5% 5% 5%	1/4W F 1/10W 1/10W	
Q1351 Q1358 Q1359	8-729-216-22 8-729-931-02	TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S TRANSISTOR 2S	A1162-G C2413K-	·Q		R223 R224 R225	1-216-043-00 1-249-433-11 1-211-771-11	CARBON	560 22K 4.7	5% 5%	1/4W F	
Q1360 Q1361	8-729-216-22 8-729-216-22	TRANSISTOR 2S TRANSISTOR DT	A1162-G			R226 R227 R228	1-249-412-11 1-216-081-00 1-216-081-00	CARBON METAL GLAZE	390 22K 22K	5% 5% 5%	1/4W 1/10W 1/10W	
Q1362 Q1363	8-729-920-74	TRANSISTOR 2S		-QR		R229	1-216-039-00	METAL GLAZE	390	5%	1/10W	
	< RES	ISTOR >				R230 R231	1-216-246-91 1-216-097-00	METAL GLAZE	100K 100K	5% 5%	1/8W 1/10W	
JR110		METAL GLAZE		5%	1/10W	R232	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
JR111 JR113 JR114	1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE METAL GLAZE	0	5% 5% 5%	1/10W 1/10W 1/10W	R233 R234	1-216-071-00 1-216-069-00	METAL GLAZE	8.2K 6.8K	5%	1/10W 1/10W	
JR271 JR272	1-216-295-91 1-216-295-91			5% 5%	1/10W 1/10W	R235 R236 R239	1-216-073-00 1-216-081-00 1-216-295-91	METAL GLAZE	10K 22K 0	5% 5% 5%	1/10W 1/10W 1/10W	
JR1351 JR1352 JR1353	1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE METAL GLAZE	0	5% 5% 5%	1/10W 1/10W 1/10W	R241 R242	1-216-065-00 1-216-295-91	METAL GLAZE	4.7K 0	5% 5%	1/10W 1/10W	
JR1355	1-216-295-91	METAL GLAZE	-	5%	1/10W	R244 R245	1-216-069-00 1-216-089-91	METAL GLAZE	6.8K 47K 100K	5%	1/10W 1/10W 1/10W	
JR1357 JR1358 JR1359	1-216-295-91 1-216-296-91 1-216-296-91	METAL GLAZE METAL GLAZE	0	5% 5% 5%	1/10W 1/8W 1/8W	R246 R247 R248	1-216-097-00 1-216-073-00 1-216-025-00	METAL GLAZE	10K 10K 100	5% 5%	1/10W 1/10W 1/10W	
JR1360 JR1361	1-216-296-91 1-216-296-91	METAL GLAZE	-	5% 5%	1/8W 1/8W	R250 R251	1-216-095-00 1-216-057-00	METAL GLAZE	82K 2.2K	5% 5%	1/10W 1/10W	
JR1362 JR1363	1-216-296-91 1-216-296-91		0	5% 5%	1/8W 1/8W	R252 R253	1-216-073-00 1-216-073-00	METAL GLAZE	10K 10K	5% 5%	1/10W 1/10W	
JR1364	1-216-295-91	METAL GLAZE	0	5%	1/10W	R254	1-216-252-00	METAL GLAZE	180K	5%	1/8W	
R071 R072 R073	1-249-413-11 1-216-033-00 1-216-033-00	CARBON METAL GLAZE METAL GLAZE	220	5% 5% 5%	1/4W 1/10W 1/10W	R255 R256	1-216-252-00 1-247-807-31	METAL GLAZE CARBON	180K 100	5% 5%	1/8W 1/4W (KV-X2993B)	
R074 R076	1-216-049-00 1-216-057-00		1K 2.2K	5% 5%	1/10W 1/10W	R256	1-249-409-11	•	220 X2991A	5% , X29	1/4W 91D, X2993E)	
R077 R101 R102	1-216-025-00 1-216-025-00 1-216-049-00	METAL GLAZE METAL GLAZE METAL GLAZE	100	5% 5% 5%	1/10W 1/10W 1/10W	R257 R257	1-247-807-31 1-249-409-11	CARBON	100 220	5% 5%	1/4W (KV-X2993B) 1/4W	
R103 R105	1-216-049-00 1-216-059-00 1-216-073-00	METAL GLAZE	2.7K	5% 5%	1/10W 1/10W	R258	1-216-089-91	(KV-	X2991A 47K		91D, X2993E) 1/10W	
R108 R109	1-216-081-00 1-216-045-00	METAL GLAZE METAL GLAZE	680	5% 5%	1/10W 1/10W	R259 R260	1-216-063-00 1-216-063-00	METAL GLAZE	3.9K 3.9K	5% 5% 5%	1/10W 1/10W	
R110 R111 R115	1-216-045-00 1-216-033-00 1-216-061-00	METAL GLAZE METAL GLAZE METAL GLAZE	220	5% 5% 5%	1/10W 1/10W 1/10W	R294 R295 R296	1-216-037-00 1-216-027-00 1-216-075-00	METAL GLAZE	330 120 12K	5% 5%	1/10W 1/10W 1/10W	
R116 R117	1-215-901-00 1-216-045-00	METAL OXIDE	680	5% 5%	2W F 1/10W	R391 R392	1-216-069-00 1-216-061-00	METAL GLAZE		5% 5%	1/10W 1/10W	
R118	1-216-045-00	METAL GLAZE	680	5%	1/10W	R393	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

A IF (KV-X2991A/X29911 X2993E)/ <u>)</u>
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REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTIO	N		REMARK
R394 R395	1-216-081-00 1-216-091-00	METAL GLAZE 22K METAL GLAZE 56K (KV-X299	5% 5% .A, X299	1/10W 1/10W 1D, X2993E)	R1396 R1397 R1399	1-216-079-00 1-216-089-91 1-216-089-91		18K 5% 47K 5% 47K 5%		I
R396 R623 R685 R691 R692	1-216-081-00 1-216-065-00 1-216-295-91 1-249-421-11 1-216-385-11	METAL GLAZE 0 CARBON 2.21	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/4W 3W F	R2301 R2302 R2303 R2304 R2305	1-216-025-00 1-216-113-00 1-216-057-00 1-216-057-00 1-216-683-11	METAL GLAZE METAL GLAZE METAL GLAZE METAL CHIP	100 5% 470K 5% 2.2K 5% 2.2K 5% 22K 0.	1/10W 1/10W 1/10W 1/10W 50% 1/10W	! ! !
R693 R694 R695 R696 R697	1-216-073-00 1-216-471-11 1-216-065-00 1-216-067-00 1-216-073-00	METAL GLAZE 10K METAL OXIDE 27 METAL GLAZE 4.79 METAL GLAZE 5.68 METAL GLAZE 10K		1/10W 3W F 1/10W 1/10W 1/10W	R2306 R2307 R2308 R2309 R2310	1-216-659-11 1-216-073-00 1-216-073-00 1-216-081-00 1-216-683-11	METAL GLAZE METAL GLAZE METAL GLAZE	10K 5% 10K 5% 22K 5%	50% 1/10W 1/10W 1/10W 1/10W 1/10W 50% 1/10W	ī ī
R1351 R1352 R1354 R1355 R1356	1-216-067-00 1-216-043-00 1-216-025-00 1-216-171-00 1-216-043-00	METAL GLAZE 5.61 METAL GLAZE 560 METAL GLAZE 100 METAL GLAZE 75 METAL GLAZE 560	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/8W 1/10W	R2311 R2313 R2314 R2316 R2318	1-216-049-00 1-216-081-00 1-216-037-00 1-216-295-91 1-216-295-91		1K 5% 22K 5% 330 5% 0 5% 0 5%	1/10W 1/10W 1/10W 1/10W 1/10W	ī ī
R1357 R1358 R1359 R1361	1-216-049-00 1-216-295-91 1-216-295-91 1-216-057-00		5% 5% 5%	1/10W 1/10W 1/10W 1/10W	R2320 R2321 R2322	1-216-069-00 1-216-053-00 1-216-015-00		6.8K 5% 1.5K 5% 39 5%	1/10W 1/10W 1/10W	1
		(KV-X299	1A, X29	91D, X2993E)		< VAR	IABLE RESISTOR	, >		
R1362 R1363 R1364 R1364 R1365	1-216-647-11 1-216-655-11 1-216-641-11 1-216-641-11 1-216-641-11	METAL CHIP 1.58 METAL CHIP 390 METAL CHIP 680	0.50% 0.50% 0.50%	1/10W 1/10W 1/10W 1/10W 1/10W	RV101	< TUN	RES, ADJ, CER ER > TUNER (UV916H			
				1/10W		******	,		*******	*****
R1365 R1366 R1367 R1368 R1369	1-216-641-11 1-208-789-11 1-216-633-11 1-216-657-11 1-216-647-11	METAL CHIP 2K	0.50% 0.50% 0.50%	1/10W 1/10W 1/10W 1/10W		1-466-733-11	IF BLOCK (IFH	-389)		
R1370 R1370 R1371 R1372 R1373	1-216-641-11 1-216-641-11 1-216-053-00 1-216-057-00 1-216-053-00 1-216-115-00	METAL CHIP 680 METAL GLAZE 1.5P METAL GLAZE 2.2P METAL GLAZE 1.5P	0.50% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	C101 C102 C103 C104 C105	1-163-121-00 1-164-222-11 1-164-232-11 1-164-232-11	ACITOR > CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.22MF 0.01MF 0.01F	5% 10% 10% 10%	50V 25V 50V 50V 25V
R1375 R1376 R1377 R1378	1-216-033-00 1-216-637-11 1-216-638-11 1-216-638-11 1-216-049-00	METAL GLAZE 220 METAL CHIP 270 METAL CHIP 300 METAL CHIP 300	5% 0.50% 0.50%	1/10W 1/10W 1/10W 1/10W 1/10W	C106 C107 C108 C109 C112	1-124-477-11 1-164-004-11 1-164-004-11 1-164-232-11		47MF 0.1MF 0.1MF 0.01F	20% 10% 10% 10% 10%	16V 25V 25V 50V 25V
R1380 R1381 R1382 R1383	1-216-099-00 1-216-073-00 1-216-101-00 1-216-041-00	METAL GLAZE 120K METAL GLAZE 10K METAL GLAZE 150K METAL GLAZE 470	5% 5%	1/10W 1/10W 1/10W 1/10W	C113 C114 C115 C116	1-164-101-00 1-124-477-11 1-164-232-11 1-164-346-11	CERAMIC CHIP ELECT CERAMIC CHIP CERAMIC CHIP	22PF 47MF 0.01F 1MF	5% 20% 10%	50V 16V 50V 16V
R1384 R1385 R1386 R1387 R1388	1-216-041-00 1-216-025-00 1-216-025-00 1-216-025-00 1-216-043-00	METAL GLAZE 100 METAL GLAZE 100 METAL GLAZE 100 METAL GLAZE 560	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	C118 C119 C121 C122 C123	1-163-369-11 1-163-235-11 1-164-239-11 1-163-235-11	CERAMIC CHIP CERAMOC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	47PFF 22PF 33PF 22PF	10% 5% 5% 5% 5%	25V 25V 50V 50V 50V
R1389 R1390 R1391 R1392 R1393	1-216-025-00 1-216-077-00 1-216-065-00 1-216-073-00 1-216-057-00	METAL GLAZE 15K METAL GLAZE 4.7F METAL GLAZE 10K	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	C124 C130 C131 C133 C152	1-216-295-00 1-163-093-00 1-124-477-11		0 10PF 47MF	10% 5% 5% 20%	25V 1/10W 50V 16V 16V
R1394 R1395	1-216-051-00 1-216-295-91		5% 5%	1/10W 1/10W	C153		CERAMIC CHIP			16V

	KV-X2991A/X2991D/	1
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REF.NO.	PART NO.	DESCRIPTION	REMAR	K REF.NO.	PART NO.	DESCRIPTION	N	Ė	REMARK	
C154 C155 C156 C161 C162	1-164-232-11 1-124-477-11 1-164-117-00 1-164-222-11	CERAMIC CHIP 2.2MF CERAMIC CHIP 0.01F ELECT 47MF CERAMIC CHIP 100PF CERAMIC CHIP 0.22MF CERAMIC CHIP 1MF	16V 10% 50V 20% 16V 5% 50V 25V	JR2 JR3 JR4 JR7 JR8	1-216-295-00 1-216-296-00 1-216-295-00 1-216-295-00	METAL GLAZE	0 5% 0 5% 0 5% 0 5% 0 5%	1/10W 1/8W 1/10W 1/10W 1/10W		
C164 C165 C166 C167	1-163-141-00 1-164-232-11 1-124-477-11 1-163-213-00	CERAMIC CHIP 0.001MF CERAMIC CHIP 0.01F	5% 50V 10% 50V 20% 16V 5% 50V	JR9 JR11 JR14 JR16 JR18	1-216-296-00 1-216-296-00 1-216-296-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	0 5% 0 5% 0 5% 0 5% 0 5%	1/8W 1/8W 1/8W 1/10W 1/10W		
C168 C170 C171 C173	1-124-477-11 1-124-477-11 1-124-477-11	ELECT 47MF ELECT 47MF	20% 16V 20% 16V 20% 16V	JR19 JR20 JR21 JR23	1-216-296-00 1-216-296-00 1-216-296-00	METAL GLAZE METAL GLAZE	0 5% 0 5% 0 5% 0 5%	1/8W 1/8W 1/8W 1/8W		
				JR24		METAL GLAZE	0 5%	1/8W	4)
CF2 CF3 CF4 SWF1	1-527-840-00 1-567-570-00	FILTER, CERAMIC FILTER, CERAMIC FILTER, CERAMIC FILTER, SAWTOOTH WAVE	· · · .	JR25 JR29 JR30 JR33 JR38	1-216-296-00 1-216-295-00	METAL GLAZE	0 5% 0 5% 0 5% 0 5% 0 5% 0 5%	1/8W 1/8W 1/10W 1/10W 1/8W		
	< COI	NNECTOR >		JR39	1-216-296-00	METAL GLAZE	0 5%	1/8W		
CN1 CN2		PIN, CONNECTOR (PC BOAR) PIN, CONNECTOR (PC BOAR)		JR40	1-216-296-00	METAL GLAZE	0 5%	1/8		
		IMMER >		R101 R102	1-216-075-00 1-216-073-00	METAL GLAZE	12K 5% 10K 5%	1/10W 1/10W		
				R103	1-216-057-00	METAL GLAZE	2.2K 5%	1/10W)
CT1		TRAP, CERAMIC		R104 R106	1-216-051-00 1-216-049-00		1.2K 5% 1K 5%	1/10W 1/10W		1
	< DIC	ODE >		R107	1-216-065-00	METAL GLAZE	4.7K 5%	1/10W		
D161	8-719-400-18	DIODE MA152WK		R108 R110	1-216-065-00 1-216-041-00	METAL GLAZE METAL GLAZE	4.7K 5% 470 5%	1/10W 1/10W		
	< IC	> '		R113 R114	1-216-031-00 1-216-049-00		180 5% 1K 5%	1/10W 1/10W		
IC1 IC2 IC3	8-759-070-76 8-759-070-71 8-759-514-54			R115 R116 R117		METAL GLAZE	120 5% 150K 5% 100K 5%	1/10W 1/10W 1/10W		
	< CO	IL >		R118 R119	1-216-117-00		680K 5% 56K 5%	1/10W 1/8W	•	
L101 L102 L103 L104 L121	1-408-421-00 1-408-419-00 1-408-419-00 1-408-408-00 1-408-413-00	INDUCTOR 100UH INDUCTOR 68UH INDUCTOR 68UH INDUCTOR 8.2UH INDUCTOR 22UH		R120 R121 R122 R123 R124	1-216-075-00 1-216-053-00 1-216-061-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	12K 5% 1.5K 5% 3.3K 5% 12K 5% 470 5%	1/10W 1/10W 1/10W 1/10W 1/10W		
L122 L142 L151 L161	1-408-420-00 1-408-790-00 1-408-419-00 1-408-419-00	INDUCTOR 0.56UH		R125 R127 R130 R131 R132	1-216-041-00 1-216-047-00 1-216-049-00 1-216-025-00	METAL GLAZE METAL GLAZE METAL GLAZE	470 5% 820 5% 1K 5% 100 5% 6.8K 5%	1/10W 1/10W 1/10W 1/10W 1/10W		
Q101 Q102	8-729-920-74	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SA1162-G		R133 R134		METAL GLAZE	3.3K 5% 1K 5%	1/10W 1/10W		
Q121 Q122 Q161	8-729-920-74 8-729-216-22 8-729-216-22	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SA1162-G		R135 R150 R151	1-216-198-00 1-216-043-00	METAL GLAZE METAL GLAZE METAL GLAZE	1K 5% 560 5% 560 5%	1/8W 1/10W 1/10W		
Q170 Q171 Q172 Q173	8-729-920-74 8-729-920-74	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR		R152 R153 R154 R155 R156	1-216-025-00 1-216-049-00	METAL GLAZE METAL GLAZE	560 5% 100 5% 1K 5% 1.2K 5% 27K 5%	1/10W 1/10W 1/10W 1/10W 1/10W)
				R157	1-216-051-00	METAL GLAZE	1.2K 5%	1/10W		
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	IF (KV-X2991A/X2991D/ X2993E)
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IF	(KV-X2993B)
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REF.NO.	PART NO.	DESCRIPTION	1		F	EMARK	REF.NO.	PART NO.	DESCRIPTIO	N		REMARK
R159	1-216-107-00	METAL GLAZE	270K	5% 5%	1/10W 1/10W		C151	1-124-477-11	ELECT	47MF	20%	16V
R160 R161	1-216-049-00 1-216-755-11	METAL CHIP	130K	0.50%	1/10W		C152 C161	1-124-477-11 1-124-477-11		47MF 47MF	20% 20%	16V 16V
R162				5%	1/10W		C162 C173	1-124-477-11 1-124-477-11 1-163-017-00	ELECT	47MF	20% 10%	16V 50V
R163 R164	1-216-113-00 1-216-113-00	METAL GLAZE	470K 470K	5%	1/10W 1/10W	:	C174	1-163-227-11			0.5PF	50V
R165 R166	1-216-081-00 1-216-049-00	METAL GLAZE	1K	5%	1/10W 1/10W		C175 C177	1-163-227-11 1-164-004-11	CERAMIC CHIP	10PF	0.5PF 10%	50V 25V
R167	1-216-073-00			5%	1/10W		C191 C201	1-164-232-11 1-164-346-11	CERAMIC CHIP	0.01MF	10%	50V 16V
R168 R169	1-216-049-00	METAL GLAZE			1/10W 1/10W		C202	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R170 R171	1-216-083-00 1-216-075-00	METAL GLAZE	12K	5% 5%	1/10W 1/10W 1/10W		C203 C204	1-124-477-11 1-164-346-11	ELECT	47MF	20%	16V 16V
R172			2.7K	•	1/10W		C205 C206	1-164-161-11 1-163-251-11	CERAMIC CHIP	0.0022MF	10% 5%	50V 50V
R173 R174	1-216-059-00 1-216-057-00	METAL GLAZE	2.2K		1/10W 1/10W		C207	1-164-222-11	CERAMIC CHIP	0.22MF	J 0	25V
R175 R176	1-216-083-00 1-216-075-00 1-216-095-00	METAL GLAZE	12K		1/10W 1/10W		C208 C302	1-163-141-00 1-164-232-11			5% 10%	50V 50V
R177					1/10W		C502 C503	1-104 232 11 1-124-477-11 1-164-232-11	ELECT	47MF	20% 10%	16V 50V
R178 R179	1-216-059-00 1-216-057-00	METAL GLAZE	2.7K 2.2K 330	5%	1/10W 1/10W		C901	1-124-477-11		47MF	20%	16V
R180 R181	1-216-037-00 1-216-037-00			5%	1/10W		C902	1-163-059-91	CERAMIC CHIP	0.01MF	10%	50V
	< VAR	IABLE RESISTOR	>					< FIL	TER >			
RV1	1-241-121-11	RES, ADJ, CAR	BON 4.7	'K			CF171 CF172	1-567-100-00 1-567-101-11				
<i>)</i> .	< TRA	NSFORMER >					CF173 CF174	1-760-107-21 1-760-106-21	FILTER, CERA	MIC		
T4 T5	1-416-017-21 1-416-018-21						SWF101	1-579-273-11				
		*****	*****	*****	*****	*****	SWF103	1-760-244-21				
	1-467-735-11	IF BLOCK (IFH	-389FX)	(KV-	X2993B)		< CON	NECTOR >			
		********					CN1 CN2	1-750-919-11 1-750-919-11				
\		ACITOR >						< TRI	MMER >			
C101 C102	1-164-232-11	CERAMIC CHIP	0.01MF		10% 10%	50V 50V	CT101	1-760-154-21	TRAP, CERAMI	C		
C104 C111	1-163-017-00 1-164-004-11	CERAMIC CHIP CERAMIC CHIP	0.1MF	IF.	10% 10%	25V	CT131	1-409-430-11		C		
C112	1-163-133-00				5%	50V		< DIC				
C113 C114	1-124-925-11		0.22MF 2.2MF		10% 20%	16V 50V	D101 D171	8-719-914-43 8-719-914-43	DIODE DAN202	K		
C115 C116	1-124-916-11 1-124-916-11		22MF 22MF		20% 20%	50V 50V	D201	8-719-914-43		K		
C117	1-163-090-00	CERAMIC CHIP			0.25PF			< IC				
C120 C121	1-124-925-11 1-124-925-11	ELECT	2.2MF 2.2MF		20% 20%	50V 50V	IC1 IC2	8-759-193-13 8-759-514-54	IC BA7046			
C122 C123	1-164-489-11 1-164-232-11	CERAMIC CHIP	0.22MF 0.01MF		10% 10%	16V 50V	IC3 IC4	8-752-069-79 8-759-710-86	IC CXA1875M IC NJM2233BM			
C126	1-163-085-00				0.25PF			< COI	L >			
C128 C131	1-163-113-00	CERAMIC CHIP	68PF		10% 5%	16V 50V	L101	1-408-419-00	INDUCTOR	68UH		
C132 C133	1-163-113-00	CERAMIC CHIP CERAMIC CHIP	68PF		5% 5%	50V 50V	L102 L131	1-410-985-11 1-408-407-00	INDUCTOR	6.8UH		
C134	1-163-239-11				5%	50V	L132 L142	1-410-426-21 1-408-409-00		39UH 10UH		
C135 C141	1-124-477-11 1-163-249-11	CERAMIC CHIP	47MF 82PF		20% 5%	16V 50V	L171	1-408-609-41		33UH		
C143 C145	1-163-251-11 1-124-477-11	CERAMIC CHIP ELECT	100PF 47MF		5% 20%	50V 16V	L201 L501	1-408-419-00 1-408-411-00	INDUCTOR	68UH 15UH		
						·	L901	1-408-411-00	INDUCTOR	15UH		

IF (KV-X2993B)

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTIO	N		REMARK)
01.01		ANSISTOR >		JR138 JR140 JR141	1-216-296-91 1-216-296-91 1-216-296-91	METAL GLAZE	0 0 0	5% 5% 5%	1/8W 1/8W 1/8W	
Q101 Q102 Q104	8-729-104-80 8-729-901-01 8-729-901-01			JR142 JR143	1-216-295-91 1-216-296-91	METAL GLAZE	0	5% 5%	1/10W 1/8W	
Q121 Q131	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR145 JR146	1-216-296-91 1-216-295-91	METAL GLAZE	0	5% 5%	1/8W 1/10W	
Q132 Q141 Q142	8-729-920-74 8-729-920-74	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR		JR150 JR152 JR154	1-216-295-91 1-216-296-91 1-216-296-91	METAL GLAZE	0 0 0	5% 5% 5%	1/10W 1/8W 1/8W	
Q151 Q152	8-729-920-74	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR		JR160 JR161	1-216-296-91 1-216-295-91	METAL GLAZE	0	5% 5%	1/8W 1/10W	
Q153 Q154 Q161	8-729-901-01 8-729-920-74	TRANSISTOR 2SC2412K-QR TRANSISTOR DTC144EK TRANSISTOR 2SC2412K-QR		JR162 JR166 JR167	1-216-295-91 1-216-295-91 1-216-296-91	METAL GLAZE	0	5% 5% 5%	1/10W 1/10W 1/8W	
Q162 Q171	8-729-216-22	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SA1162-G		R100 R102 R103	1-216-025-00 1-216-059-00 1-216-001-00	METAL GLAZE	100 2.7K 10	5% 5% 5%	1/10W 1/10W 1/10W	\ ./
Q174 Q175 Q176	8-729-901-01 8-729-901-01	TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR DTC144EK TRANSISTOR 2SC2412K-QR		R103 R104 R105	1-216-001-00 1-216-176-11 1-216-017-00	METAL GLAZE	120 47	5% 5%	1/8W 1/10W	
Q181 Q191 Q201	8-729-216-22	TRANSISTOR 2SA1162-G TRANSISTOR 2SA1162-G		R106 R107 R109	1-216-057-00 1-216-057-00 1-216-057-00	METAL GLAZE	2.2K 2.2K 2.2K	5%	1/10W 1/10W 1/10W	
Q201		SISTOR >		R111 R113	1-216-295-91 1-216-031-00	METAL GLAZE	0 180	5% 5%	1/10W 1/10W	
JR101 JR102 JR103	1-216-296-91	METAL GLAZE 0 5% METAL GLAZE 0 5% METAL GLAZE 0 5%	1/10W 1/8W 1/8W	R114 R115 R116	1-216-035-00 1-216-035-00 1-216-025-00	METAL GLAZE	270 270 100	5% 5% 5%	1/10W 1/10W 1/10W	>
JR104 JR106	1-216-295-91 1-216-296-91	METAL GLAZE 0 5%	1/10W 1/8W	R117 R118	1-216-031-00 1-216-061-00	METAL GLAZE	180 3.3K	5%	1/10W 1/10W	
JR107 JR109 JR110	1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE 0 5% METAL GLAZE 0 5% METAL GLAZE 0 5%	1/10W 1/10W 1/10W	R120 R131 R133	1-216-180-00 1-216-198-91 1-216-031-00	METAL GLAZE	180 1K 180	5% 5% 5%	1/8W 1/8W 1/10W	
JR111 JR112	1-216-296-91 1-216-295-91	METAL GLAZE 0 5%	1/8W 1/10W	R134 R135	1-216-049-00 1-216-295-91	METAL GLAZE	1K 0	5% 5%	1/10W 1/10W	
JR113 JR114 JR115	1-216-296-91 1-216-295-91 1-216-295-91		1/8W 1/10W 1/10W	R136 R137 R138	1-216-041-00 1-216-041-00 1-216-049-00	METAL GLAZE	470 470 1K	5% 5% 5%	1/10W 1/10W 1/10W	`
JR116 JR117	1-216-296-91 1-216-296-91	METAL GLAZE 0 5%	1/8W 1/8W	R139 R140	1-216-067-00 1-216-295-91	METAL GLAZE	5.6K 0	5% 5%	1/10W 1/10W	/
JR118 JR119 JR120	1-216-296-91 1-216-296-91 1-216-295-91	METAL GLAZE 0 5%	1/8W 1/8W 1/10W	R142 R144 R145	1-216-049-00 1-216-041-00 1-216-041-00	METAL GLAZE	1K 470 470	5% 5% 5%	1/10W 1/10W 1/10W	
JR121 JR122	1-216-296-91 1-216-296-91	METAL GLAZE 0 5%	1/8W 1/8W	R146 R147	1-216-043-00 1-216-025-00		560 100	5% 5%	1/10W 1/10W	
JR123 JR124 JR125	1-216-296-91 1-216-296-91 1-216-295-91	METAL GLAZE 0 5%	1/8W 1/8W 1/10W	R148 R149 R151	1-216-049-00 1-216-049-00 1-216-226-00	METAL GLAZE	1K 1K 15K	5% 5% 5%	1/10W 1/10W 1/8W	
JR126 JR127	1-216-295-91 1-216-296-91		1/10W 1/8W	R152 R153	1-216-069-00 1-216-689-11	METAL GLAZE METAL GLAZE	6.8K 39K	5% 5%	1/10W 1/10W	
JR128 JR129 JR130	1-216-295-91 1-216-295-91 1-216-296-91	METAL GLAZE 0 5%	1/10W 1/10W 1/8W	R154 R155 R156	1-216-057-00 1-216-057-00 1-216-037-00	METAL GLAZE	2.2K 2.2K 330		1/10W 1/10W 1/10W	
JR131 JR132	1-216-296-91 1-216-296-91	METAL GLAZE 0 5% METAL GLAZE 0 5%	1/8W 1/8W	R161 R162	1-216-079-00 1-216-069-00	METAL GLAZE	18K 6.8K		1/10W 1/10W	
JR133 JR134 JR135	1-216-296-91 1-216-295-91 1-216-296-91	METAL GLAZE 0 5%	1/8W 1/10W 1/8W	R163 R164 R165	1-216-689-11 1-216-057-00 1-216-057-00	METAL GLAZE	39K 2.2K 2.2K	5%	1/10W 1/10W 1/10W	
JR136 JR137	1-216-295-91 1-216-296-91	METAL GLAZE 0 5%	1/10W 1/8W	R166 R167	1-216-037-00 1-216-073-00		330 10K	5% 5%	1/10W 1/10W	
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									IE (kv.x	2993B)	M3
REF.NO.	PART NO.	DESCRIPTIO	N		R	EMARK	REF.NO.	PART NO.	DESCRIPTION)	REMARK
MET.NO.	FARI NO.	DECOMM NO					-				4.6
R168 R169 R171 R177	1-216-212-00 1-216-067-00 1-216-045-00 1-216-025-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	3.9K 5.6K 680 100		1/8W 1/10W 1/10W 1/10W		C018 C019 C020	1-164-505-11 1-124-916-11 1-163-117-00	CERAMIC CHIP 2.2MF ELECT 22MF CERAMIC CHIP 100PF		16V 50V 50V
R178	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W		C022 C023	1-164-004-11 1-164-004-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.1MF		25V 25V
R179 R180 R181 R182	1-216-057-00 1-216-057-00 1-216-041-00 1-216-041-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	2.2K 2.2K 470 470	5% 5% 5%	1/10W 1/10W 1/10W 1/10W		C024 C025 C026	1-164-004-11 1-164-222-11 1-164-222-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.22M CERAMIC CHIP 0.22M	F	25V 25V 25V 50V
R183	1-216-192-00	METAL GLAZE	560	5%	1/8W		C032 C036	1-163-117-00 1-163-005-11	CERAMIC CHIP 100PF CERAMIC CHIP 470PF		50V
R184 R185 R191 R192	1-216-043-00 1-216-067-00 1-216-093-00 1-216-093-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	560 5.6K 68K 68K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W		C042 C081 C2001	1-162-638-11 1-163-113-00 1-163-235-11	CERAMIC CHIP 1MF CERAMIC CHIP 68PF CERAMIC CHIP 22PF	5% 5%	16V 50V 50V
R193	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W		C2002 C2003	1-163-235-11 1-164-222-11	CERAMIC CHIP 22PF CERAMIC CHIP 0.22M	5% F	50V 25V
R194 R195 R201	1-216-049-00 1-216-216-00 1-216-198-91 1-216-107-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	1K 5.6K 1K 270K	5% 5% 5%	1/10W 1/8W 1/8W 1/10W		C2004 C2005 C2008	1-164-222-11 1-163-038-00 1-164-222-11	CERAMIC CHIP 0.22M CERAMIC CHIP 0.1MF CERAMIC CHIP 0.22M		25V 25V 25V
R202 R203	1-216-073-00	METAL GLAZE	10K	5%	1/10W		C2010 C2016	1-163-038-00 1-164-222-11	CERAMIC CHIP 0.1MF CERAMIC CHIP 0.22M		25V 25V
R204 R205 R206	1-216-113-00 1-218-755-11 1-216-049-00	METAL GLAZE METAL CHIP METAL GLAZE	470K 130K 1K	5%	1/10W 5 1/10W 1/10W		C2017 C2019 C2020	1-164-222-11 1-164-222-11 1-124-916-11 1-164-222-11	CERAMIC CHIP 0.22M ELECT 22MF CERAMIC CHIP 0.22M	F 20%	25V 50V 25V
R207 R208	1-216-113-00 1-216-113-00	METAL GLAZE METAL GLAZE	470K 470K	5% 5%	1/10W 1/10W		C2021	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
R209 R210 R211	1-216-049-00 1-216-081-00 1-216-073-00	METAL GLAZE METAL GLAZE METAL GLAZE	1K 22K 10K	5% 5% 5%	1/10W 1/10W 1/10W		C2024 C2025 C2027 C2029	1-163-117-00 1-163-117-00 1-164-222-11 1-163-113-00	CERAMIC CHIP 100PF CERAMIC CHIP 100PF CERAMIC CHIP 0.22M CERAMIC CHIP 68PF	5%	50V 50V 25V 50V
R301 R302	1-216-073-00 1-216-073-00	METAL GLAZE METAL GLAZE	10K 10K	5% 5%	1/10W 1/10W		C2031	1-163-031-11	CERAMIC CHIP 0.01M	iF	50V
R303	1-216-049-00	METAL GLAZE	1K	5%	1/10W			< FII	TER >		
R306 R308	1-216-049-00 1-216-073-00	METAL GLAZE METAL GLAZE	1K 10K	5% 5%	1/10W 1/10W		CD001	1-579-126-11	VIBRATOR, CERAMIC		
R309 R310	1-216-025-00 1-216-025-00	METAL GLAZE METAL GLAZE	100 100	5% 5%	1/10W 1/10W			< CON	INECTOR >		
KSIO		RIABLE RESISTOR			_,_,		CN1413 CN1432		CONNECTOR, BOARD T		
RV111 RV112		RES, ADJ, CAR						< DIC	DDE >		
	< TRA	ANSFORMER >					D001	8-719-027-82	DIODE MA3039H		
Т111	1-403-686-22	COIL					D2001 D2007		DIODE MA3030H DIODE MA3027H		
*****	******	*******	*****	*****	*****	*****		< IC	>		
	*A-1635-018-A	M3 BOARD, COI					IC001 IC002	8-759-289-21 1-750-797-11	IC SDA30C163-2GEG IC TMS27PC010A15FM SOCKET, PLCC; ICC	002	
	< CAI	PACITOR >					IC2002 IC2003	8-759-262-58	IC SDA5273P-C22-GE IC MB81C4256A-70P8	EG	
C001 C002 C003 C004	1-163-117-00 1-163-117-00 1-164-222-11	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	100PF 100PF 0.22M	F	5% 5% 5%	50V 50V 50V 25V 50V	L001 L2001	< COI 1-408-421-00 1-410-674-31	IL > INDUCTOR 100	OUH	
C007		CERAMIC CHIP			5%		L2001	1-410-397-21	FERRITE BEAD INDUC		
C008 C010	1-163-117-00	CERAMIC CHIP	100PF		5% 5%	50V 50V		< TRA	ANSISTOR >		
C011 C012	1-163-117-00	CERAMIC CHIP CERAMIC CHIP	100PF		5% 5%	50V 50V	Q002	8-729-216-22	TRANSISTOR 2SA1162	2-G	
C014	1-163-117-00	CERAMIC CHIP	100PF		5%	50V	Q2002 Q2004	8-729-901-00	TRANSISTOR 2SC2412 TRANSISTOR DTC124	ΞK	
C016 C017	1-163-141-00 1-164-222-11	CERAMIC CHIP CERAMIC CHIP	0.001 0.22M	MF F	5%	50V 25V	Q2005 Q2006	8-729-920-74	TRANSISTOR 2SC2412 TRANSISTOR DTC1441	2K-QR	



Les composants identifies par une trame et une marque /ħ/
sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked 🕰 are critical for safety. Replace only with the part number specified.

Region Region Tanks: 1970 R. 1.10	REF.NO.	PART NO.	DESCRIPTIO	N		REMARK	REF.NO.	PART NO.	DESCRIPTIO	N	-	REMARK
RECORD 1-216-25-5-3 HETAL GLAZE 0 St 1/100 RECORD 1-216-25-5-3 HETAL GLAZE 0 St 1/100 RECORD 1-216-25-5-3 HETAL GLAZE 10 St 1/100 RECORD 1-216-05-00 HETAL GLAZE 10 St 1/100	Q2008	8-729-901-00	TRANSISTOR D	TC124EK								
1-216-025-00 METAL GLAZE 10 5% 1/100		< RES	SISTOR >				R2023	1-216-295-91	METAL GLAZE	0 5%	1/10	W
1-215-035-00 MERNA GLAZE 100 5% 1/100 E2028 1-216-03-00 MERNA GLAZE 20 5% 1/100 E2028 1-216-03-00 MERNA GLAZE 10 5% 1/100 E2028 1-216-03-00 MERNA GLAZE 20 5% 1/100 E2028 1-216-03-00 MERNA GLAZE 20 5% 1/100 E2028 1-216-03-00 MERNA GLAZE 10 5% 1/100 E2028 1-216-03-00 MERNA GLAZE 15 5% 1/100 E2028	JR2002	1-216-295-91	METAL GLAZE	0	5%							
ROOS								1-216-033-00	METAL GLAZE			
ROOF 1-216-039-00 MSTAL GLAZE 18 5% 1/100	R003											
1-216-049-00 METAL GLAZE IX 5% 1/10W R013 1-216-049-00 METAL GLAZE IX 5% 1/10W CRYSTRAL								1-216-049-00	METAL GLAZE	1K 5%	1/10	W
ROLD 1-216-049-00 METAL GLARE IX 5% 1/100												
R012	R010	1-216-049-00						CDV	romat s			
R013												
1-216-049-00 MSTAL GLAZE 18 5% 1/10W 1-216-049-10 MSTAL GL	R013	1-216-049-00	METAL GLAZE	1K	5%	1/10W						
R018							*****	******	********	*****	*****	******
	R017	1-216-049-00	METAL GLAZE	1K	5%	1/10W		*A-1636-007-A				
R020												
R022								< CAE	ACITOR >			
R023		1-216-065-00			5%							
1-216-049-00 METAL GLAZE IX 5% 1/10W C607 1-124-927-11 ELECT 4.7MF 20% 50V												
RO25	R023	1-216-025-00	METAL GLAZE	100	5%	1/10W				*		
R026										4.7MF	20%	50V
R032							0600	1_126_327_11	DI.DOM	22ME	20%	507
R033												
R035 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C612 1-124-903-11 ELECT 1MF 20% 50V R035 1-216-073-00 METAL GLAZE 2.2K 5% 1/10W C613 1-124-907-11 ELECT 10MF 20% 50V R049 1-216-049-00 METAL GLAZE 10K 5% 1/10W C615 1-126-337-11 ELECT 20MF 20% 50V R050 1-216-037-00 METAL GLAZE 10K 5% 1/10W C615 1-126-337-11 ELECT 20MF 20% 50V R050 1-216-037-00 METAL GLAZE 10K 5% 1/10W C615 1-126-337-11 ELECT 20MF 10% 50V R051 1-216-639-91 METAL GLAZE 0 5% 1/10W C617 1-164-493-11 CERANIC CHIP 0.47MF 10% 50V R052 1-216-658-00 METAL GLAZE 4.7K 5% 1/10W C651 1-124-618-11 ELECT 220MF 20% 35V R053 1-216-607-00 METAL GLAZE 5.6K 5% 1/10W C651 1-124-618-11 ELECT 220MF 20% 35V R057 1-216-052-00 METAL GLAZE 5.6K 5% 1/10W C651 1-124-618-11 ELECT 220MF 20% 35V R057 1-216-052-00 METAL GLAZE 5.6K 5% 1/10W C655 1-107-869-11 ELECT 470MF 20% 25V R056 1-216-043-00 METAL GLAZE 5.6K 5% 1/10W C655 1-107-995-11 ELECT 470MF 20% 25V R066 1-216-043-00 METAL GLAZE 560 5% 1/10W C658 1-124-618-11 ELECT 470MF 20% 50V R069 1-216-043-00 METAL GLAZE 560 5% 1/10W C659 1-164-044-11 ELECT 33MF 20% 50V R069 1-216-043-00 METAL GLAZE 560 5% 1/10W C659 1-164-044-11 ELECT 33MF 20% 50V R081 1-216-043-00 METAL GLAZE 560 5% 1/10W C659 1-164-044-11 ELECT 33MF 20% 50V R082 1-216-043-00 METAL GLAZE 560 5% 1/10W C659 1-164-044-11 ELECT 33MF 20% 50V R083 1-216-043-00 METAL GLAZE 5% 5% 1/10W C659 1-164-044-11 ELECT 33MF 20% 50V R083 1-216-043-00 METAL GLAZE 5% 5% 1/10W C666 1-124-519-11 ELECT 30MF 20% 50V R084 1-216-043-00 METAL GLAZE 5% 5% 1/10W C666 1-126-037-11 ELECT 30MF 20% 50V R084 1-216-043-00 METAL GLAZE 5% 5% 1/10W							C610			1MF		
ROSS 1-216-057-00 METAL GLAZE 10K 5% 1/10W C613 1-124-907-11 ELECT 10MF 20% 50V C613 1-216-043-00 METAL GLAZE 10K 5% 1/10W C615 1-126-337-11 ELECT 2MF 20% 50V C615 1-216-043-00 METAL GLAZE 10K 5% 1/10W C615 1-126-337-11 ELECT 2MF 20% 50V C615 1-216-043-00 METAL GLAZE 10K 5% 1/10W C616 1-164-493-11 ELECT 2MF 20% 50V C617 1-164-649-11 ELECT 2MF 20% 2MF 20% 35V C617 216-055-00 METAL GLAZE 4.7K 5% 1/10W C650 1-124-618-11 ELECT 220MF 20% 35V C655 1-216-057-00 METAL GLAZE 100 5% 1/10W C654 1-124-618-11 ELECT 220MF 20% 35V C655 1-107-880-11 ELECT 470MF 20% 20% 25V C655 1-107-880-11 ELECT 470MF 20% 20	D024	1-216-057-00	MEMAT CTATE	2 217	5%	1 /1 OW						
R038							0012	1 124 303 11	DDDCI	THE	200	301
R050 1-216-073-00 METAL GLAZE 10K 5% 1/10W C615 1-164-493-11 CERANIC CHIP 0.047MF 10% 50V	R038	1-216-073-00	METAL GLAZE									
R051 1-216-295-91 METAL GLAZE 0 5% 1/10W C641 1-106-367-00 MYLAR 0.01MF 10% 400V R052 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W C651 1-124-618-11 ELECT 2200MF 20% 35V R056 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W C651 1-124-618-11 ELECT 2200MF 20% 35V R057 1-216-025-00 METAL GLAZE 100 5% 1/10W C651 1-124-618-11 ELECT 2200MF 20% 35V R057 1-216-025-00 METAL GLAZE 100 5% 1/10W C654 1-128-601-11 ELECT 4700MF 20% 25V R056 1-216-043-00 METAL GLAZE 560 5% 1/10W C655 1-107-880-11 ELECT 4700MF 20% 10V R068 1-216-043-00 METAL GLAZE 560 5% 1/10W C655 1-107-880-11 ELECT 330F 10% 500V R068 1-216-049-00 METAL GLAZE 560 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V R081 1-216-049-00 METAL GLAZE 1K 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V R081 1-216-049-00 METAL GLAZE 1K 5% 1/10W C659 1-164-004-11 CERAMIC GLAZE 1K 5% 1/10W C662 1-136-51-51 FILM 0.47MF 20% 300V C662 1-136-51-00 METAL GLAZE 1K 5% 1/10W C663 1-106-343-00 MYLAR 0.001MF 10% 100V C664 1-102-002-00 CERAMIC GLAZE 1K 5% 1/10W C666 1-124-479-11 ELECT 330MF 20% 25V C667 1-124-037-01 ELECT 330MF 20% 25V C667 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-122-11 ELECT 330MF 20% 25V C667 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-122-11 ELECT 100MF 20% 50V C667 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-122-11 ELECT 330MF 20% 25V C667 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-122-11 ELECT 0.0047MF 20% 50V C673 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-122-11 ELECT 0.0047MF 20% 50V C673 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-125-155-11 ELECT 0.0047MF 20% 50V C673 1-126-035-00 METAL GLAZE 1K 5% 1/10W C668 1-124-0								1-126-337-11	CERAMIC CHIP			
R052 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W C650 1-124-618-11 ELECT 2200MF 20% 35V R054 1-216-025-00 METAL GLAZE 5.6K 5% 1/10W C651 1-124-618-11 ELECT 2200MF 20% 35V R057 1-216-025-00 METAL GLAZE 100 5% 1/10W C654 1-128-601-11 ELECT 2200MF 20% 35V R057 1-216-035-00 METAL GLAZE 2.2K 5% 1/10W C655 1-104-618-11 ELECT 4700MF 20% 25V C655 1-104-618-11 ELECT 4700MF 20% 25V C655 1-164-644-11 CERAMIC 330FF 10% 500V R067 1-216-043-00 METAL GLAZE 560 5% 1/10W C655 1-164-644-11 CERAMIC 330FF 10% 500V R068 1-216-043-00 METAL GLAZE 560 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V R081 1-216-049-00 METAL GLAZE 15% 1/10W C659 1-164-004-11 ELECT 33MF 20% 50V R081 1-216-049-00 METAL GLAZE 15% 1/10W C659 1-164-004-11 ELECT 33MF 20% 50V R083 1-216-049-00 METAL GLAZE 15% 1/10W C659 1-164-004-11 ELECT 33MF 20% 300V R083 1-216-049-00 METAL GLAZE 15% 1/10W C662 1-136-421-12 FILM 0.47MF 20% 300V R083 1-216-049-00 METAL GLAZE 15% 1/10W C662 1-136-415-51 FILM 0.47MF 20% 300V R084 1-216-049-00 METAL GLAZE 15% 1/10W C664 1-136-343-00 MYLAR 0.001MF 10% 500V R2003 1-216-051-00 METAL GLAZE 15% 1/10W C666 1-124-479-11 ELECT 20MF 20% 50V R2004 1-216-023-00 METAL GLAZE 25% 1/10W C666 1-124-479-11 ELECT 20MF 20% 50V R2004 1-216-037-00 METAL GLAZE 25% 1/10W C666 1-124-479-11 ELECT 20MF 20% 50V R2004 1-216-057-00 METAL GLAZE 27% 3/10W C671 1-137-218-11 FILM 0.012MF 5% 800V R2004 1-216-057-00 METAL GLAZE 27% 3/10W C671 1-137-218-11 FILM 0.012MF 5% 800V R2004 1-216-057-00 METAL GLAZE 27% 3/10W C673 1-126-599-12 CERAMIC 0.0047MF 250V R2013 1-216-017-00 METAL GLAZE 27% 3/10W C675 1-124-910-11 ELECT 30MF 20%	1030	1 210 075 00	METHI CEMED	1011	3.0	1/10//		1-164-493-11	CERAMIC CHIP	0.047MF	10%	50V
R054 1-216-295-91 METAL GLAZE 0 5% 1/10W C650 1-124-618-11 ELECT 2200MF 20% 35V R056 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W C651 1-124-618-11 ELECT 2200MF 20% 35V R057 1-216-025-00 METAL GLAZE 100 5% 1/10W C655 1-107-880-11 ELECT 4700MF 20% 25V C655 1-107-880-11 ELECT 4700MF 20% 25V C655 1-107-880-11 ELECT 4700MF 20% 25V C655 1-107-880-11 ELECT 4700MF 20% 10V C656 1-26-043-00 METAL GLAZE 560 5% 1/10W C656 1-164-644-11 CERAMIC 330PF 10% 500V C656 1-26-043-00 METAL GLAZE 560 5% 1/10W C657 1-107-995-11 ELECT 100MF 0 160V C658 1-216-043-00 METAL GLAZE 330 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V C661 1-216-049-00 METAL GLAZE 1K 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 300V C661 1-136-527-12 FILM 0.47MF 20% 300V C661 1-136-527-12 FILM 0.47MF 20% 300V C661 1-136-527-12 FILM 0.47MF 20% 300V C662 1-136-415-51 FILM 0.33MF 20% 300V C662 1-136-415-51 FILM 0.33MF 20% 300V C662 1-136-415-51 FILM 0.33MF 20% 300V C663 1-124-479-11 ELECT 100MF 10% 100V C664 1-102-002-00 METAL GLAZE 1K 5% 1/10W C664 1-102-002-00 CERAMIC 680PF 10% 500V C667 1-126-337-11 ELECT 22MF 20% 50V C667 1-126-359-12 ELECT 100MF 20% 50V C673 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-126-017-00 METAL GLAZE 47 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V C673 1-126-910-10 METAL GLAZE 47 5%							C641	1-106-367-00	MYLAR	0.01MF	10%	400V
R056 1-216-067-00 METAL GLAZE 5.6K 5% 1/10W C651 1-124-618-11 ELECT 2200MF 20% 35V C655 1-216-025-00 METAL GLAZE 100 5% 1/10W C654 1-128-601-11 ELECT 4700MF 20% 25V C655 1-107-880-11 ELECT 4700MF 20% 25V C655 1-107-880-11 ELECT 4700MF 20% 20% 10V C656 1-216-043-00 METAL GLAZE 560 5% 1/10W C656 1-164-644-11 CERAMIC 330FF 10% 500V C657 1-216-043-00 METAL GLAZE 560 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V C658 1-216-043-00 METAL GLAZE 1K 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V C659 1-216-049-00 METAL GLAZE 1K 5% 1/10W C659 1-136-527-12 FILM 0.47MF 20% 300V C661 1-136-527-12 FILM 0.47MF 20% 300V C662 1-136-049-00 METAL GLAZE 1K 5% 1/10W C662 1-136-415-51 FILM 0.33MF 20% 300V C662 1-136-049-00 METAL GLAZE 1K 5% 1/10W C662 1-136-415-51 FILM 0.33MF 20% 300V C663 1-216-049-00 METAL GLAZE 1K 5% 1/10W C664 1-102-002-00 CERAMIC 680FF 10% 500V C667 1-216-051-00 METAL GLAZE 1K 5% 1/10W C666 1-124-479-11 ELECT 330MF 20% 500V C667 1-216-037-00 METAL GLAZE 25 % 1/10W C666 1-124-479-11 ELECT 330MF 20% 500V C667 1-216-037-00 METAL GLAZE 25 % 1/10W C668 1-124-129-11 ELECT 330MF 20% 500V C673 1-162-037-00 METAL GLAZE 100 5% 1/10W C670 1-37-218-11 FILM 0.012MF 5% 800V C673 1-162-599-12 CERAMIC 0.0047MF 250V C674 1-125-555-11 ELECT 0.0047MF 250V C674 1-125-555-11 ELECT 0.0047MF 250V C674 1-125-555-11 ELECT 0.0047MF 250V C674 1-125-559-12 CERAMIC 0.0047MF 250V C674 1-125-059-12 CERAMIC 0.0047MF 250V C674 1-125-559-12 CERAM							C650	1-124-618-11	ELECT	2200MF	20%	35V
R060 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C655 1-107-880-11 ELECT 4700MF 20% 500V R069 1-216-043-00 METAL GLAZE 560 5% 1/10W C657 1-107-995-11 ELECT 100MF 0 160V R069 1-216-037-00 METAL GLAZE 560 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V R081 1-216-049-00 METAL GLAZE 1K 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 50V R081 1-216-049-00 METAL GLAZE 1K 5% 1/10W C658 1-124-917-11 ELECT 33MF 20% 300V R083 1-216-049-00 METAL GLAZE 1K 5% 1/10W C661 1.1-36-527-12 FILM 0.47MF 20% 300V R083 1-216-049-00 METAL GLAZE 1K 5% 1/10W C662 1.1-36-415-51 FILM 0.33MF 20% 300V R2001 1-216-050-00 METAL GLAZE 1K 5% 1/10W C663 1-106-343-00 MYLAR 0.001MF 10% 100V R2001 1-216-050-00 METAL GLAZE 1K 5% 1/10W C664 1-102-002-00 CERAMIC 680FF 10% 500V R2003 1-216-051-00 METAL GLAZE 1X 5% 1/10W C664 1-124-479-11 ELECT 330MF 20% 25V C667 1-126-337-11 ELECT 330MF 20% 50V R2003 1-216-051-00 METAL GLAZE 82 5% 1/10W C666 1-124-479-11 ELECT 330MF 20% 50V R2003 1-216-051-00 METAL GLAZE 82 5% 1/10W C666 1-124-479-11 ELECT 330MF 20% 50V R2003 1-216-051-00 METAL GLAZE 82 5% 1/10W C666 1-124-479-11 ELECT 30MF 20% 50V R2001 1-216-073-00 METAL GLAZE 82 5% 1/10W C666 1-124-479-11 ELECT 100MF 20% 50V R2001 1-216-073-00 METAL GLAZE 10% 5% 1/10W C667 1-137-218-11 FILM 0.012MF 5% 800V R2009 1-216-057-00 METAL GLAZE 10% 5% 1/10W C671 1-137-218-11 FILM 0.012MF 5% 800V R2009 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C671 1-137-218-11 FILM 0.012MF 5% 800V R2001 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C671 1-137-218-11 FILM 0.012MF 5% 800V R2011 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C675 1-124-910-11 ELECT 30MF 20% 400V R2011 1-216-057-00 METAL GLAZE 47 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V C673 1-162-599-12 CERAMIC 0.0047MF 250V C675 1-124-910-11 ELECT 47MF 20% 50V C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-162-599-	R056	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	C651					
R060	R057	1-216-025-00	METAL GLAZE	100	5%	1/10W						
R067	R060	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W						
R069	R067							4 405 005 44		4.0.014		1.60**
R081 1-216-049-00 METAL GLAZE 1K 5% 1/10W C659 1-164-004-11 CERAMIC CHIP 0.1MF 10% 25V C661 1-136-527-12 FILM 0.41MF 20% 300V C662 1-136-415-51 FILM 0.33MF 20% 300V C662 1-136-415-51 FILM 0.01MF 10% 100V C663 1-106-343-00 MYLAR 0.001MF 10% 100V C664 1-102-002-00 CERAMIC 680PF 10% 500V C666 1-124-479-11 ELECT 330MF 20% 25V C667 1-126-037-11 ELECT 330MF 20% 25V C667 1-126-337-11 ELECT 22MF 20% 50V C668 1-124-122-11 ELECT 100MF 20% 50V C668 1-124-122-11 ELECT 100MF 20% 50V C668 1-124-122-11 ELECT 100MF 20% 50V C671 1-137-218-11 FILM 0.012MF 5% 800V C671 1-137-218-11 FILM 0.012MF 5% 800V C672 1-166-599-12 CERAMIC 0.0047MF 250V C673 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-126-017-00 METAL GLAZE 100 5% 1/10W C674 1-125-555-11 ELECT 330MF 20% 400V C674 1-125-555-11 ELECT 330MF 20% 400V C675 1-124-910-11 ELECT 47MF 20% 50V C675 1-124-910-11 ELECT 47MF 20% 50V C675 1-124-910-11 ELECT 47MF 20% 50V C676 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-162-599-12 CERAMIC 0.0047M											-	
R082 1-216-049-00 METAL GLAZE 1K 5% 1/10W R083 1-216-049-00 METAL GLAZE 1K 5% 1/10W R084 1-216-049-00 METAL GLAZE 1K 5% 1/10W R2001 1-216-055-00 METAL GLAZE 1K 5% 1/10W R2001 1-216-055-00 METAL GLAZE 1K 5% 1/10W R2001 1-216-055-00 METAL GLAZE 1X 5% 1/10W R2001 1-216-055-00 METAL GLAZE 1X 5% 1/10W R2001 1-216-055-00 METAL GLAZE 1X 5% 1/10W R2005 1-216-041-00 METAL GLAZE 470 5% 1/10W R2007 1-216-055-00 METAL GLAZE 10K 5% 1/10W R2008 1-216-055-00 METAL GLAZE 10K 5% 1/10W R2009 1-216-057-00 METAL GLAZE 10K 5% 1/10W R2009 1-216-057-00 METAL GLAZE 2X 5% 1/10W R2009 1-216-057-00 METAL GLAZE 2X 5% 1/10W R2001 1-216-057-00 METAL GLAZE 2X 5% 1/10W R2011 1-216-057-00 METAL GLAZE 47 5% 1/10W R2012 1-216-057-00 METAL GLAZE 47 5% 1/10W R2013 1-216-017-00 METAL GLAZE 47 5% 1/10W R2013 1-216-017-00 METAL							C659	1-164-004-11	CERAMIC CHIP	0.1MF		25V
R083		4 046 040 00		4 ***	ro.	4 /4 077						positional distriction and an arrest continued
R084 1-216-049-00 METAL GLAZE 1K 5% 1/10W C663 1-106-343-00 MYLAR 0.001MF 10% 100V R2001 1-216-065-00 METAL GLAZE 4.7K 5% 1/10W C664 1-102-002-00 CERAMIC 680FF 10% 500V C666 1-124-479-11 ELECT 330MF 20% 25V C667 1-126-337-11 ELECT 22MF 20% 50V C667 1-126-337-11 ELECT 22MF 20% 50V C668 1-124-122-11 ELECT 100MF 20% 50V C668 1-126-041-00 METAL GLAZE 470 5% 1/10W C670 1-137-218-11 FILM 0.012MF 5% 800V C671 1-137-218-11 FILM 0.012MF 5% 800V C671 1-137-218-11 FILM 0.012MF 5% 800V C672 1-160-057-00 METAL GLAZE 100 5% 1/10W C671 1-137-218-11 FILM 0.012MF 5% 800V C673 1-162-599-12 CERAMIC 0.0047MF 250V C675 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-161-							U002	//: 1-130-419-31		0.2000	40%	
R2003 1-216-051-00 METAL GLAZE 1.2K 5% 1/10W C666 1-124-479-11 ELECT 330MF 20% 50V C667 1-126-337-11 ELECT 22MF 20% 50V C667 1-126-037-11 ELECT 100MF 20% 50V C668 1-216-041-00 METAL GLAZE 82 5% 1/10W C668 1-124-122-11 ELECT 100MF 20% 50V C670 1-216-073-00 METAL GLAZE 10K 5% 1/10W C670 1-137-218-11 FILM 0.012MF 5% 800V C671 1-137-218-11 FILM 0.012MF 5% 800V C672 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-126-057-00 METAL GLAZE 100 5% 1/10W C674 1-125-555-11 ELECT 330MF 20% 400V C675 1-126-057-00 METAL GLAZE 2.2K 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V C675 1-216-017-00 METAL GLAZE 47 5% 1/10W C675 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C677 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C677 1-162-599-12 CERAMIC 0.0047MF 250V C676 1-266-017-00 METAL GLAZE 47 5% 1/10W C677 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-266-017-00 METAL GLAZE 47 5% 1/10W C678 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-266-017-00 METAL GLAZE 47 5% 1/10W C678 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-266-017-00 METAL GLAZE 47 5% 1/10W C678 1-161-742-00 CERAMIC 0.0022MF 20% 400V C678 1-266-017-00 METAL GLAZE 47 5% 1/10W C678 1-161-742-00 CERAMIC 0.0022MF 20% 400V C678 1-161-742-00 CERA							C663					
R2004												
R2004 1-216-023-00 METAL GLAZE 82 5% 1/10W C668 1-124-122-11 ELECT 100MF 20% 50V R2005 1-216-041-00 METAL GLAZE 470 5% 1/10W R2007 1-216-073-00 METAL GLAZE 10K 5% 1/10W C670 1-137-218-11 FILM 0.012MF 5% 800V R2008 1-216-025-00 METAL GLAZE 100 5% 1/10W C671 1-137-218-11 FILM 0.012MF 5% 800V R2009 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C672 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-126-057-00 METAL GLAZE 2.2K 5% 1/10W C674 1-125-555-11 ELECT 330MF 20% 400V R2011 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V R2013 1-216-017-00 METAL GLAZE 47 5% 1/10W C675 1-162-599-12 CERAMIC 0.0047MF 250V R2013 1-216-017-00 METAL GLAZE 47 5% 1/10W C675 1-162-599-12 CERAMIC 0.0047MF 250V R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C678 1-161-742-00 CERAMIC 0.0022MF 20% 400V	R2003	1-216-051-00	METAL GLAZE	1,2K	5%	1/10W						
R2007 1-216-073-00 METAL GLAZE 10K 5% 1/10W C670 1-137-218-11 FILM 0.012MF 5% 800V C671 1-137-218-11 FILM 0.012MF 5% 800V C671 1-137-218-11 FILM 0.012MF 5% 800V C672 1-162-599-12 CERAMIC 0.0047MF 250V C673 1-126-017-00 METAL GLAZE 2.2K 5% 1/10W C674 1-125-555-11 ELECT 330MF 20% 400V C675 1-126-017-00 METAL GLAZE 47 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V C676 1-162-599-12 CERAMIC 0.0047MF 250V C678 1-161-742-00 CERAMIC 0.0022MF 20% 400V C678 1-161-742-00 CERAMIC 0.0022MF 20% 400V	R2004			82								50V
R2008 1-216-025-00 METAL GLAZE 100 5% 1/10W C671 1-137-218-11 FILM 0.012MF 5% 800V C672 1 1-162-599-12 CERAMIC 0.0047MF 250V C673 1 1-162-599-12 CERAMIC 0.0047MF 250V C674 1-125-555-11 ELECT 330MF 20% 400V C674 1-125-555-11 ELECT 330MF 20% 400V C675 1 1-124-910-11 ELECT 47MF 20% 50V C675 1 1-124-910-11 ELECT 47MF 20% 50V C676 1 1-162-599-12 CERAMIC 0.0047MF 250V C678 1 1-161-742-00 CERAMIC 0.0022MF 20% 400V C678 1 1-161-742-00 CERAMIC 0.0022MF 20% 400V		1-216-041-00	METAL GLAZE				0670	1_127_01011	PTIM	0 012MP	5%	800V
R2009 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C672 1 1-162-599-12 CERAMIC 0.0047MF 250V C673 1 1-216-057-00 METAL GLAZE 100 5% 1/10W C674 1-125-555-11 ELECT 330MF 20% 400V R2011 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V R2013 1-216-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C678 1 1-161-742-00 CERAMIC 0.0022MF 20% 400V												
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R2011 1-216-057-00 METAL GLAZE 2.2K 5% 1/10W R2012 1-216-017-00 METAL GLAZE 47 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V R2013 1-216-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C678 1 1-161-742-00 CERAMIC 0.0022MF 20% 400V	D2010	1_216_025_00	אפתאו מואספ	100	5%	1/1014	The second by the Control of the second				2.0%	
R2012 1-216-017-00 METAL GLAZE 47 5% 1/10W C675 1-124-910-11 ELECT 47MF 20% 50V R2013 1-216-017-00 METAL GLAZE 47 5% 1/10W C676 1-162-599-12 CERAMIC 0.0047MF 250V R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C678 1-161-742-00 CERAMIC 0.0022MF 20% 400V							C0/4	1 125-355-11	динст	Journ		
R2014 1-216-017-00 METAL GLAZE 47 5% 1/10W C678 1 1-161-742-00 CERAMIC 0.0022MF 20% 400V	R2012	1-216-017-00	METAL GLAZE	47	5%	1/10W					20%	
											20%	
	VVATA	1-210-011-00	MEIND GUNDE	7/	J.0							

Les composants identifies par une trame et une marque 🛕 sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked $\hat{}$ are critical for safety. Replace only with the part number specified.



REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	ON			REMAR	IK.
C681	1-126-337-11	ELECT 22MF	20%	50V	L651	1-412-525-21	INDUCTOR	10UH				
C682	1-124-120-11	ELECT 220MF	20%	25V		< TRA	NSFORMER >					
	< CON	NECTOR >			LF661 /t	1-424-436-11	TRANSFORMER,	LINE F	ILTER	CEDIA-MARIA CONTROL CO		
CN0005 CN0006	1-508-765-00 1-695-915-11	PIN, CONNECTOR (5MM TAB (CONTACT)	PITCH) 3P		Type years	< IC	LINK >					
CN0007 /	* 1-508-786-00 *1-568-882-51	PIN, CONNECTOR (5MM PIN, CONNECTOR 7P			PS602 1	1-532-686-21 1-532-686-21	LINK, IC ICE	-N50 2.	7A			
CN0931	Practice of the Control of the Contr	PIN, CONNECTOR (PC			PS603 /1	1-532-686-21		'-N50 Z.	/A	The first of the second of the		
CN0947		PIN, CONNECTOR (5MM	PITCH) 6P		0.504		NSISTOR >	031160	a .			
	< DIO				Q601 Q602	8-729-216-22 8-729-025-19	TRANSISTOR I	RFI740G		. 0602		
D602 D603 D604	8-719-110-49	DIODE EGP10D DIODE RD18ESB2 DIODE RD18ESB2			Q603	4-382-854-11 8-729-025-19 4-382-854-11		RFI740G				
D605 D606	8-719-901-33	DIODE 1SS133 DIODE RD18ESB2			0604	8-729-920-74						
D607		DIODE EGP10D			Q605 Q606	8-729-216-22 8-729-920-74	TRANSISTOR 2	SA1162-	G ·			
D608 D610	8-719-110-49 8-719-983-38	DIODE RD18ESB2 DIODE MTZJ-36B			Q607 Q608	8-729-920-74 8-729-920-74	TRANSISTOR 2	SC2412K	-QR			
D611 D612	8-719-979-58 8-719-914-43	DIODE EGP10D DIODE DAN202K			Q610	8-729-216-22	TRANSISTOR 2	SA1162-	G			
D613	8-719-914-43	DIODE DAN202K			Q652 Q653	8-729-920-74 8-729-216-22	TRANSISTOR 2	SA1162-	G			
D614 D615	8-719-914-43	DIODE D1N20R DIODE DAN202K			Q661	8-729-920-74	ISTOR >	15C2412K	-QK			
D616 D651	8-719-510-48 8-719-047-31	DIODE D1N20R DIODE RBA-402L			JR651	1-216-296-91		0	5%	1/8W		
D653		DIODE RBA-406B SCREW (M3X10), P, S	W (+) : D65	3	JR652	1-216-296-91		0	5%	1/8W		
D655 D657	8-719-047-31	DIODE RBA-402L DIODE DAN202K	W (1) 7 203		R604 R605	1-216-660-11 1-216-236-11		2.4K 39K	0.50% 5%	1/10W 1/8W		
D658		DIODE D1N20R			R606 R607	1-216-669-11 1-216-073-00	METAL CHIP METAL GLAZE	5.6K 10K	0.50% 5%	1/10W		
D661 D662	8-719-914-43	DIODE 1SS133 DIODE DAN202K			R608	1-249-393-11		10	5%	1/4W		
D663 D664	8-719-109-89	DIODE D4SB60L DIODE RD5.6ESB2			R609 R610	1-249-397-11 1-215-880-00	METAL OXIDE	22 10	5% 5%	1/4W 2W		
) D670		DIODE EGP10D			R611 R612	1-249-393-11 1-249-397-11	CARBON	10 22	5% 5%	1/4W 1/4W 5W	F F	
		RRITE BEAD >	OD 1 1777		R613 R614	1-211-968-11		0.56	5%	ow 2W	_	
FB603 FB604	1-410-397-21	FERRITE BEAD INDUCT FERRITE BEAD INDUCT FERRITE BEAD INDUCT	OR 1.1UH		R616 R617	1-216-222-00 1-216-053-00	METAL GLAZE	10K 1.5K	5%	1/8W 1/10W	r	
FB605 FB654 FB655	1-410-397-21	FERRITE BEAD INDUCT FERRITE BEAD INDUCT	OR 1.1UH		R618 R619	1-216-222-00 1-216-254-00		10K 220K	5%	1/8W 1/8W		
FB033	1-410-337-21 < IC		ON 111011		R620	1-216-198-91		1K	5%	1/8W		
IC601		IC MC34025P			R621 R625	1-216-097-00 1-216-049-00	METAL GLAZE	100K 1K	5%	1/10W 1/10W		
IC602	8-759-185-47 7 8-749-923-44	IC IR2112 IC SFH617G-1			R626 R628	1-216-186-00 1-249-441-11		330 100K	5% 5%	1/8W 1/4W		
IC604 IC605	8-759-908-15	IC TL431CLP			R632	1-249-441-11		100K		1/4W		
IC610	1-810-051-11	IC RC78M15FA POWER MODULE DM-48			R633 R634	1-216-049-00 1-216-186-00	METAL GLAZE	1K 330	5% 5%	1/10W 1/8W 1/4W		
`\	< CO1				R635 R636	1-215-442-00 1-215-431-00		7.5K 2.7K		1/4W 1/4W		
L601	1-412-525-21				R637 R638	1-247-807-31 1-216-073-00		100 10K	5% 5%	1/4W 1/10W		
L602 L603 L604	1-412-525-21 1-412-525-21 1-412-525-21	INDUCTOR 10UH			R639 R640	1-216-073-00 1-216-089-91 1-249-417-11	METAL GLAZE	47K 1K	5% 5%	1/10W 1/4W		
L650	1-412-525-21				R641	1-247-903-00		1M	5%	1/4W		



Les composants identifies par une trame et une marque \triangle sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked \hat{A} are critical for safety. Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	Į			REMARK	REF.NO.	PART NO.	DESCRIPTION				REMARK
R642 R643 R651	1-247-903-00 1-216-691-11 1-215-880-00	CARBON METAL CHIP METAL OXIDE	47K 10	5% 0.50% 5% 5%		F	C718 C719 C720	1-102-129-00 1-124-903-11 1-126-326-51	ELECT	0.01MF 1MF 10MF	2	10% 10% 10%	50V 50V 250V
R658 R660	1-249-415-11 1-207-905-00	CARBON WIREWOUND		10%		F		< CON	NECTOR >				
R661 R662 R663	1-535-143-11 1-249-427-11 1-249-424-11 1-205-998-11	CARBON CARBON	6.8K 3.9K	5%	1/4W 1/4W 10W	F	CN0004 CN0403 CN0421	1-695-915-11 *1-564-513-11 *1-508-767-00	PLUG, CONNECT	OR 10P	PITCH)	5P	: `
	1-218-265-11		8.2M	5%	10			< DIO					
R670 🗈	1-249-430-11 1-249-436-11 1-205-998-11 1-205-998-11 1-214-937-00	CARBON WIREWOUND WIREWOUND	12K 39K 1 1 1M	5% 5% 5% 5% 5%	1/4W 1/4W 10W 10W 1/2W		D701 D702 D703 D704 D705	8-719-901-33 8-719-901-83 8-719-901-83 8-719-901-83 8-719-901-33	DIODE 1SS83 DIODE 1SS83 DIODE 1SS83				
R673 R678 R679 R680 R681	1-215-429-00 1-249-417-11 1-216-198-91 1-249-417-11 1-216-061-00	CARBON METAL GLAZE	1K 1K 1K	1% 5% 5% 5% 5%	1/4W 1/4W 1/8W 1/4W 1/10W	F	D706 D707 D710 D712 D714	8-719-908-03 8-719-901-33 8-719-908-03 8-719-921-69 8-719-921-88	DIODE 1SS133 DIODE GP08D DIODE MTZJ-9.				
R682 R683 R684 R685 R686	1-216-089-91 1-216-049-00 1-216-073-00 1-249-417-11 1-216-352-11	METAL GLAZE METAL GLAZE METAL GLAZE CARBON METAL OXIDE	1K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/4W 1/4W		D715 D716 D717 D720 D721	8-719-911-19 8-719-911-19 8-719-911-19 8-719-982-96 8-719-982-96	DIODE 1SS119				
R687	1-216-055-00		1.8K 220K	5%	1/10W 1/10W			< IC	>				
R688 R689 R690 R691	1-216-105-00 1-216-049-00 1-216-053-00 1-249-419-11	METAL GLAZE METAL GLAZE	1K 1.5K 1.5K	5% 5%	1/10W 1/10W 1/10W 1/4W		IC703 IC704	8-759-073-90 4-382-854-11 8-759-073-90 4-382-854-11	SCREW (M3X10) IC TDA6111Q				
	< REL	AY >					IC705	8-759-073-90	IC TDA6111Q SCREW (M3X10)				
RY661 .*	1-755-018-11	RELAY							SOCKET >				
	< TRA	NSFORMER >				E	J701 /f	1-526-990-21	SOCKET, CRT				
T650 zt.	1-426-863-11	TTTTTTT TELEVISION	CONVERD	PER (P	IT)			< COI	L >				
		RMISTOR >	******************		***************************************		L701	1-410-671-31		47UH 4.7U			
ETHICALIS POTY LETTER LANGUAGE AND	1-809-827-11	AND A 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1				*****	L704 L705 L706	1-408-405-00 1-408-405-00 1-408-405-00	INDUCTOR	4.70 4.70	H		
	*A-1638-054-A						1700		NSISTOR >	21,70	••		
		********					Q701		TRANSISTOR 2S				
C701 C702	< CAP 1-124-634-11 1-124-634-11		1MF 1MF		20% 20%	250V 250V	Q702 Q703 Q704 Q705			C2551- A1162-	O G		
C703 C704 C705	1-124-634-11 1-102-129-00 1-126-103-11	CERAMIC	1MF 0.01MF 470MF		20% 10% 20%	250V 50V 16V	Q706	8-729-920-74	TRANSISTOR 2S	C2412K	-QR		
C706	1-126-103-11		470MF		20%	16V		< RES	ISTOR >				
C708 C709 C710 C711	1-126-103-11 1-126-103-11 1-102-157-00 1-102-157-00 1-102-157-00	ELECT CERAMIC CERAMIC	470MF 560PF 560PF 560PF		20% 10% 10% 10%	16V 500V 500V 500V	R701 R702 R703 R704 R705	1-216-055-00 1-216-065-00 1-249-435-11 1-216-073-00 1-216-075-00	METAL GLAZE CARBON METAL GLAZE	1.8K 4.7K 33K 10K 12K		1/10W 1/10W 1/4W 1/10W 1/10W	
C712 C713 C714 C716 C717	1-124-916-11 1-162-116-00 1-162-115-00 1-162-116-00 1-102-129-00	CERAMIC CERAMIC CERAMIC	22MF 680PF 330PF 680PF 0.01MF		20% 10% 10% 10% 10%	50V 2KV 2KV 2KV 50V	R706 R707 R708 R709	1-249-433-11 1-249-433-11 1-249-433-11 1-249-416-11	CARBON CARBON CARBON	22K 22K 22K 22K 820	5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W	



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	REF.NO.	PART NO.	DESCRIPTIO	N		I	REMARK	REF.NO.	PART NO.	DESCRIPTION	N			REMARK
	R710 R711 R712	1-216-047-00 1-216-047-00 1-216-057-00 1-249-417-11	METAL GLAZE	820 820 2.2K	5% 5% 5%	1/10W 1/10W 1/10W 1/4W		C2566 C2567 C2568 C2569	1-163-031-11 1-163-009-11 1-163-009-11 1-164-161-11	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.001M 0.001M	F :	10% 10% 10%	50V 50V 50V 50V
	R713 R714 R715	1-216-049-00 1-216-049-00	METAL GLAZE METAL GLAZE	1K 1K 1K	5% 5%	1/10W 1/10W		C2570 C2573 C2583	1-164-336-11 1-164-232-11 1-124-477-11	CERAMIC CHIP ELECT	0.01MF 47MF		10% 20%	25V 50V 25V
	R716 R717 R718 R719	1-216-049-00 1-249-417-11 1-249-417-11 1-249-417-11	CARBON CARBON	1K 1K 1K 1K	5% 5% 5% 5%	1/10W 1/4W 1/4W 1/4W		C2590 C2591 C2592		CERAMIC CHIP	0.033M 0.1MF	:	10% 10%	25V 25V 25V
	R720	1-215-926-00		33K	5%		F	C2599		CERAMIC CHIP	0.1MF		10%	25V
	R721 R722 R723 R724	1-249-408-11 1-249-408-11	METAL OXIDE CARBON CARBON	33K 33K 180 180	5% 5% 5% 5%	3W 3W 1/4W 1/4W	F F	CN2044 CN2050		NECTOR > CONNECTOR, BO PIN, CONNECTO		BOARD	10P	
)	R725	1-249-408-11		180	5%	1/4W			< DIO	DE >				
	R726 R727 R728 R729 R730	1-202-565-00 1-202-565-00 1-202-565-00 1-249-424-11 1-249-424-11	SOLID SOLID CARBON	470 470 470 3.9K 3.9K	20% 20% 20% 5%	1/2W 1/2W 1/2W 1/4W 1/4W		D2551 D2554 D2555	8-719-914-44 8-719-302-43 8-719-302-43					
	R731	1-249-424-11		3.9K		1/4W			< IC	>				
`	R732 R733 R734 R735	1-202-549-00 1-216-081-00 1-202-549-00 1-216-047-00	SOLID METAL GLAZE SOLID	100 22K 100 820	20% 5% 20% 5%	1/2W 1/10W 1/2W 1/10W		IC2561 IC2562 IC2563 IC2581	8-752-347-92 8-759-998-98 8-759-708-05 8-759-998-98	IC LM358D IC NJM78L05A				
)	R741 R743	1-202-884-11 1-202-884-11		820K 820K		1/2W 1/2W			< COI	L >				
	R744 R750 R751	1-202-842-11 1-216-073-00 1-216-091-00	SOLID METAL GLAZE	220K 10K 56K		1/2W 1/10W 1/10W		L2561 L2562	1-408-409-00 1-408-409-00	INDUCTOR	10UH 10UH			
	R752 R753	1-249-417-11 1-215-911-11		1K 100	5% 5%	1/4W 3W	F	02565		NSISTOR > TRANSISTOR 2S	″. °2412¥.	-OR		
	K/33		IABLE RESISTOR		5.0	311		Q2566 Q2590	8-729-920-74	TRANSISTOR 2S TRANSISTOR 2S	C2412K-	-QR		
	RV701 RV704		RES, ADJ, MET RES, ADJ, MET						< RES	ISTOR >				
1			******				*****	JR2553 JR2554	1-216-295-91 1-216-295-91		0	5% 5%	1/10W 1/10W	
	,	*A-1640-125-A	D6 BOARD, COM					R2540 R2541	1-216-085-00 1-216-049-00		33K 1K	5% 5%	1/10W 1/10W	
		< CAP	ACITOR >					R2542 R2543	1-216-037-00 1-216-025-00	METAL GLAZE METAL GLAZE	330 100 33K	5% 5% 5%	1/10W 1/10W 1/10W	
	C2541 C2542 C2543 C2544 C2545	1-163-037-11 1-164-161-11 1-164-161-11	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.022M 0.0022 0.0022	f MF MF	10% 10% 10% 10%	50V 25V 50V 50V 25V	R2544 R2547 R2548 R2549 R2550 R2551	1-216-085-00 1-216-657-11 1-216-295-91 1-216-079-00 1-216-063-00 1-216-049-00	METAL CHIP METAL GLAZE METAL GLAZE METAL GLAZE		0.50% 5% 5%		,
	C2546 C2547 C2548 C2549 C2550	1-163-020-00 1-163-141-00	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.0082 0.001M 0.033M	MF F F	10% 10% 5% 10% 5%	25V 50V 50V 25V 50V	R2552 R2553 R2554 R2555 R2561	1-216-097-00 1-216-085-00 1-216-049-00 1-216-025-00 1-216-295-91	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	100K 33K 1K 100	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
)	C2551 C2554 C2560 C2563 C2564	1-163-011-11 1-164-161-11 1-163-031-11	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.0015 0.0022 0.01MF	MF MF	5% 10% 10%	50V 50V 50V 50V 50V	R2564 R2565 R2566 R2567	1-216-091-00 1-216-065-00 1-216-073-00 1-216-085-00 1-216-109-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE		5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
	C2565	1-163-031-11	CERAMIC CHIP	0.01MF			50V	R2568	1-710-103-00	MEINI GUMAE	2201	50	T/ T/W	

D6	D7	D

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTIO	<u>N</u>		REMARK
R2575 R2576 R2581 R2582 R2583	1-216-075-00 1-216-049-00 1-216-659-11 1-216-665-11 1-216-659-11	METAL CHIP 2.2 METAL CHIP 3.9	5% K 0.50 K 0.50	1/10W 1/10W % 1/10W % 1/10W % 1/10W	i i	R2701 R2702 R2703 R2704 R2705	1-216-081-00 1-216-081-00 1-216-081-00 1-216-081-00 1-216-073-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	22K 5% 22K 5% 22K 5% 22K 5% 22K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R2584 R2585 R2586 R2587 R2589	1-216-675-11 1-216-675-11 1-216-667-11 1-208-812-11 1-216-659-11	METAL CHIP 10K METAL CHIP 4.7 METAL CHIP 18K	0.50 K 0.50 0.50	% 1/10W % 1/10W % 1/10W % 1/10W % 1/10W	ī ī	R2706 R2707 R2708	1-216-073-00 1-216-295-91 1-216-073-00	METAL GLAZE METAL GLAZE METAL GLAZE	10K 5% 0 5% 10K 5%	1/10W 1/10W 1/10W	
R2591 R2592 R2593 R2594 R2595	1-216-089-91 1-216-089-91 1-216-081-00 1-216-065-00 1-216-097-00	METAL GLAZE 47K METAL GLAZE 22K METAL GLAZE 4.7	5% 5% K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	ī ī			**************************************	****		
R2596 R2597 R2599 R2600 R2601	1-216-103-91 1-216-073-00 1-216-049-00 1-216-089-91 1-216-073-00	METAL GLAZE 10K METAL GLAZE 1K	5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	7 7 7	C801 C802 C803 C804 C807	1-124-347-00 1-136-207-11 1-102-212-00 1-163-001-11 1-162-115-00	FILM CERAMIC	100MF 0.047MF 820PF 220PF 330PF	20% 10% 10% 10% 10%	160V 250V 500V 50V 2KV
R2602	1-216-105-00			1/10W		C808 C809 C810 C811	1-162-116-00 1-162-116-00 1-137-102-11 1-109-948-11	CERAMIC	680PF 680PF 0.022MF 0.015MF	10% 10% 10% 3%	2KV 2KV 250V 1.8KV
*****						C812	1-129-722-00		0.047MF	5%	630V
		D7 BOARD, COMPLET ************************************				C813 C814 C815	1-163-205-00	FILM CERAMIC CHIP		5% 10% 10%	400V 400V 50V
C2701 C2702 C2703	1-124-907-11 1-124-477-11 1-124-477-11	ELECT 47MF ELECT 47MF		20% 20% 20%	50V 25V 25V	C816 C819 C820 C821	1-109-961-11 1-136-189-00 1-124-927-11 1-164-232-11	FILM	0.75MF 0.1MF 4.7MF	5% 10% 20% 10%	400V 250V 50V 50V
C2706		CERAMIC CHIP 330P	r	10%	50V	C822 C823	1-104-232-11 1-124-910-11 1-137-370-11	ELECT	47MF 0.01MF	20% 5%	50V 50V
CN2701		PLUG, CONNECTOR 3	D			C824	1-162-117-00	CERAMIC	100PF	10%	500V
CN2702		PLUG, CONNECTOR 3				C825 C826	1-124-790-11 1-124-910-11		0.47MF 47MF	20% 20%	100V 50V
	< DIC	DE >				C827 C833	1-102-228-00 1-130-471-00	CERAMIC FILM	470PF 0.001MF	10% 5%	500V 50V
D2701 D2701		DIODE DAP202K DIODE DAP202K				C834	1-162-114-00	CERAMIC	0.0047MF		2KV
	< IC	>				C835 C836	1-123-950-00 1-102-228-00	ELECT CERAMIC	47MF 470PF	20% 10%	250V 500V
IC2701 IC2701 IC2702	8-759-603-37 8-759-603-37 8-759-701-59	IC M5216P				C837 C838 C839	1-102-228-00 1-102-228-00 1-124-480-11	ELECT	470PF 470PF 470MF	10% 10% 20%	500V 500V 25V
	< TRA	NSISTOR >				C840 C841		MYLAR	470MF 0.022MF	20% 10%	25V 250V
Q2701 Q2701		TRANSISTOR 2SC241 TRANSISTOR 2SC241				C842 C843 C855	1-136-559-11 1-106-220-00 1-163-133-00	MYLAR	0.0047MF 0.1MF 470PF	10% 10% 5%	400V 100V 50V
	< RES	SISTOR >				C860 C861	1-137-370-11 1-130-471-00		0.01MF 0.001MF	5% 5%	50V 50V
JR501 JR502 JR503 JR504	1-216-296-91 1-216-296-91 1-216-296-91 1-216-296-91	METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0	5% 5% 5% 5%	1/8W 1/8W 1/8W 1/8W 1/8W		C862 C863 C871	1-130-471-00 1-124-907-11 1-163-077-00 1-130-777-00	ELECT CERAMIC CHIP	10MF 0.1MF 0.1MF	20% 10% 5%	50V 25V 63V
JR505 JR506 JR507 JR508 JR509	1-216-296-91 1-216-296-91 1-216-296-91 1-216-296-91 1-216-296-91	METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0 METAL GLAZE 0	5% 5% 5% 5%	1/8W 1/8W 1/8W 1/8W		C873 C874 C890 C891	1-162-115-00 1-164-625-11 1-164-182-11 1-163-809-11	CERAMIC CERAMIC CHIP CERAMIC CHIP	330PF 680PF 0.0033MF 0.047MF	10% 10% 10% 10%	2KV 500V 50V 25V
JR2751	1-216-296-91	METAL GLAZE 0	5%	1/8W		C1501	1-163-141-00	CERAMIC CHIP	U.UUIMF	5%	50V



)	REF.NO.	PART NO.	DÉSCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	C1502 C1503 C1504 C1505	1-124-903-11 1-124-907-11 1-107-921-91 1-137-371-11	ELECT 10MF ELECT 100MF	20% 20% 20% 5%	50V 50V 63V 50V	D1501 D1502 D1503 D1504 D2501	8-719-982-03 8-719-908-03 8-719-110-41	DIODE DAN202K DIODE MTZJ-3.6A DIODE GP08D DIODE RD15ESB2 DIODE DAP202K	
	C1506 C1507 C1508 C1510 C1511	1-164-161-11 1-106-383-00 1-137-423-11 1-136-110-00 1-124-480-11	MYLAR 0.15MF FILM 0.91MF	10% 10% 10% 5% 20%	50V 100V 100V 200V 25V	D2502 D2503 D2506 D2507 D2508	8-719-908-03 8-719-914-43 8-719-914-44	DIODE RD5.1ESB2 DIODE GP08D DIODE DAN202K DIODE DAP202K DIODE DAN202K	
	C1512 C1513 C1514 C1516	1-164-232-11 1-124-480-11 1-124-006-11	ELECT 10MF	10% 10% 20% 20%	50V 50V 25V 25V	DY1		NECTOR > PLUG (MINIATURE DY) 6P	
)	C2502 C2503 C2504 C2505 C2506	1-163-139-00 1-124-120-11 1-163-001-11 1-164-182-11	CERAMIC CHIP 220PF CERAMIC CHIP 0.0033MF	5% 5% 20% 10%	50V 50V 16V 50V 50V	IC801 IC1501	< IC 8-759-103-93 8-759-192-71 4-201-023-01	IC µPC393C IC STV9379 SPACER, INSULATING ; IC1501	
	C2507 C2508 C2509 C2511	1-124-903-11 1-163-002-11	CERAMIC CHIP 0.01MF	20% 10% 20% 10% 10%	50V 50V 50V 50V 50V	IC2501			
)	C2520 C2521 C2522 C2523 C2528	1-124-927-11 1-124-927-11 1-124-910-11	ELECT 4.7MF	20% 20% 20% 20% 5%	50V 50V 50V 50V	L802 L803 L808 L809	1-459-123-00 1-459-123-00 1-412-519-11 1-412-519-11	COIL, DUST CORE(PAC) COIL, DUST CORE(PAC) INDUCTOR 3.3UH INDUCTOR 3.3UH	
/		< CON	NECTOR >			L810	1-412-519-11		
	CN0004 CN0009 CN0502 CN0504 CN0521	*1-564-506-11 *1-564-506-11 1-564-511-11	TAB (CONTACT) PLUG, CONNECTOR 3P PLUG, CONNECTOR 3P PLUG, CONNECTOR 8P PIN, CONNECTOR (5MM PIN	PCH) 5P		L811 L813 L814 L816 L818	1-459-104-00 1-422-613-11 1-408-947-00 1-459-123-00	COIL, DUST CORE(PAC)	
,)	CN0523 CN0544 CN0546 CN0547	1-573-296-21 *1-564-514-11	CONNECTOR, BOARD TO CONNECTOR 11P PIN, CONNECTOR (5MM PIT	ARD 10P		L1503 L2501		INDUCTOR 33UH LINK >	
		< DIO	DDE >			PS801		FERRITE BEAD INDUCTOR 1.1UH	
	D802 D803 D804	4-382-854-11 8-719-043-14 4-382-854-11	DIODE ERD08M-15 SCREW (M3X10), P, SW (- DIODE ESAD39M-06C SCREW (M3X10), P, SW (- DIODE ERC38-06			Q801 Q802 0803	8-729-119-80 8-729-821-07 4-200-399-01 4-382-854-11	TRANSISTOR 2SC2688-LK TRANSISTOR 2SC3997CA SPACER, IC; Q802 SCREW (M3X10), P, SW (+); Q81 TRANSISTOR 2SC4793	02
	D805 D806 D807 D808 D810		DIODE GP08D DIODE DAN202K DIODE DAP202K			Q804 Q805 Q806 Q860	4-382-854-11 8-729-378-84 8-729-119-78 8-729-903-29	SCREW (M3X10), P, SW (+); Q8	
Ì	D811 D812 D813 D814 D819	8-719-510-26 8-719-979-85	DIODE EL1Z DIODE D1NL20 DIODE D1NL20 DIODE EGP20G DIODE DAN202K			Q861 Q1501 Q1502 Q1503 Q1504	8-729-216-22 8-729-920-74 8-729-901-01 8-729-216-22 8-729-901-01	TRANSISTOR 2SA1162-G TRANSISTOR 2SC2412K-QR TRANSISTOR DTC144EK TRANSISTOR 2SA1162-G TRANSISTOR DTC144EK	
J	D860 D861 D862 D863 D871	8-719-914-42 8-719-914-43 8-719-914-43	DIODE DAP202K DIODE DA204K DIODE DAN202K DIODE DAN202K DIODE DAP202K			Q1505 Q2502	8-729-926-79	TRANSISTOR IRFIBC40 TRANSISTOR DTA114TK	



REF.NO.	PART NO.	DESCRIPTION	N	REMARK	REF.NO.	PART NO.	DESCRIPTION	<u> </u>	REMARK	
JR1 JR2 JR3 JR4 JR6	<pre></pre>	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	0 59 0 59 0 59 0 59 0 59	k 1/10W k 1/10W k 1/10W	R858 R860 R861 R862 R863	1-216-049-00 1-216-089-91 1-216-073-00 1-216-073-00 1-216-222-00 1-216-081-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	1K 5% 47K 5% 10K 5% 10K 5% 10K 5%	1/10W 1/10W 1/10W 1/10W 1/8W	
JR7 JR8 JR9 JR10	1-216-295-91 1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	0 59 0 59 0 59	k 1/10W k 1/10W k 1/10W	R865 R866 R871 R872	1-216-208-00 1-249-389-11 1-216-093-00 1-216-113-00	METAL GLAZE CARBON METAL GLAZE METAL GLAZE	2.7K 5% 4.7 5% 68K 5% 470K 5%	1/8W 1/4W F 1/10W 1/10W	
JR11 JR12 JR13 JR14	1-216-295-91 1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE METAL GLAZE METAL GLAZE	0 59 0 59 0 59	% 1/10W % 1/10W	R873 R890 R891 R892 R893	1-216-113-00 1-216-256-00 1-216-103-91 1-216-113-00 1-216-113-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	470K 5% 270K 5% 180K 5% 470K 5% 470K 5%	1/10W 1/8W 1/10W 1/10W 1/10W	
R801 R802 R803 R804 R805	1-216-296-91 1-215-914-11 1-215-914-11 1-215-914-11 1-216-485-11	METAL GLAZE METAL OXIDE METAL OXIDE METAL OXIDE METAL OXIDE	0 59 330 59 330 59 330 59 5.6K 59	% 3W F % 3W F % 3W F	R894 R899 R1501 R1502 R1504	1-216-121-00 1-249-377-11 1-216-663-11 1-216-049-00	METAL GLAZE CARBON METAL CHIP METAL CHIP METAL GLAZE		1/10W 1/4W F 0% 1/10W 1/10W 1/10W	
R806 R807 R808 R809 R810	1-249-411-11 1-216-061-00 1-216-386-11 1-215-880-00 1-215-914-11	CARBON METAL GLAZE METAL OXIDE METAL OXIDE METAL OXIDE	330 59 3.3K 59 0.56 59 10 59 330 59	8 1/10W 8 3W F 8 2W F	R1505 R1506 R1508 R1510 R1511	1-216-081-00 1-216-081-00 1-216-057-00 1-216-065-00 1-216-065-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	22K 5% 22K 5% 2.2K 5% 4.7K 5% 4.7K 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R812 R813 R814 R815 R816	1-216-400-11 1-216-400-11 1-216-400-11 1-216-434-11 1-249-377-11	METAL OXIDE METAL OXIDE METAL OXIDE METAL OXIDE CARBON	8.2 59 8.2 59 8.2 59 1.8K 59 0.47 59	% 3W F % 3W F % 1W F	R1512 R1513 R1514 R1515 R1516	1-216-079-00 1-216-065-00 1-216-049-00 1-215-461-00 1-249-385-11	METAL GLAZE METAL GLAZE METAL GLAZE METAL CARBON	18K 5% 4.7K 5% 1K 5% 47K 1% 2.2 5%	1/10W 1/10W 1/10W 1/4W 1/4W F	
R817 R818 R819 R820 R821	1-249-377-11 1-249-377-11 1-249-377-11 1-214-907-00 1-249-428-11	CARBON CARBON CARBON METAL CARBON	0.47 59 0.47 59 0.47 59 56K 19 8.2K 59	% 1/4W F % 1/4W F % 1/2W	R1517 R1518 R1519 R1520 R1521	1-216-376-00 1-216-392-11 1-216-475-11 1-216-061-00 1-249-424-11	METAL OXIDE METAL OXIDE METAL OXIDE METAL GLAZE CARBON	3.9 5% 1.8 5% 120 5% 3.3K 5% 3.9K 5%	2W F 3W F 3W F 1/10W 1/4W	
R822 R826 R830 R831 R833	1-216-073-00 1-216-121-00 1-211-795-11 1-215-915-11 1-216-061-00	METAL GLAZE METAL GLAZE FUSIBLE METAL OXIDE METAL GLAZE	10K 59 1M 59 470 59 470 59 3.3K 59	% 1/10W % 1/4W F % 3W F	R2501 R2502 R2503 R2504 R2505	1-216-081-00 1-216-206-00 1-216-075-00 1-216-674-11 1-216-071-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL CHIP METAL GLAZE	22K 5% 2.2K 5% 12K 5% 9.1K 0.5 8.2K 5%	1/10W 1/8W 1/10W 0% 1/10W 1/10W	
R834 R835 R837 R838 R839	1-202-842-11 1-216-230-00 1-216-059-00 1-216-067-00 1-216-214-00	METAL GLAZE METAL GLAZE METAL GLAZE	220K 20 22K 59 2.7K 59 5.6K 59 4.7K 59	% 1/8W % 1/10W % 1/10W	R2506 R2507 R2508 R2509 R2510	1-216-675-11 1-216-651-11 1-216-678-11 1-216-687-11 1-216-675-11	METAL CHIP METAL CHIP METAL CHIP	1K 0.5 13K 0.5 33K 0.5	0% 1/10W 0% 1/10W 0% 1/10W 0% 1/10W 0% 1/10W	
R840 R841 R842 R843 R844	1-216-083-00 1-249-423-11 1-249-399-11 1-202-826-00 1-215-445-00	METAL GLAZE CARBON CARBON SOLID METAL	27K 59 3.3K 59 33 59 4.7K 10 10K 19	6 1/4W 6 1/4W F 0% 1/2W	R2511 R2512 R2513 R2514 R2515	1-216-675-11 1-216-079-00 1-216-061-00 1-216-083-00 1-216-246-91	METAL GLAZE METAL GLAZE METAL GLAZE	10K 0.5 18K 5% 3.3K 5% 27K 5% 100K 5%	0% 1/10W 1/10W 1/10W 1/10W 1/8W	
R845 R847 R848 R849 R850	1-216-099-00 1-249-416-11 1-215-477-00 1-216-073-00 1-249-409-11	METAL GLAZE CARBON METAL METAL GLAZE CARBON	120K 59 820 59 220K 19 10K 59 220 59	8 1/4W 8 1/4W 8 1/10W	R2525 R2527 R2529 R2530 R2531	1-216-037-00 1-249-397-11 1-216-230-00 1-216-073-00 1-216-073-00	CARBON METAL GLAZE METAL GLAZE	330 5% 22 5% 22K 5% 10K 5% 10K 5%	1/10W 1/4W F 1/8W 1/10W 1/10W	
R851 R852 R853 R855	1-216-374-00 1-216-113-00 1-216-107-00 1-216-125-00	METAL GLAZE	2.7 59 470K 59 270K 59 1.5M 59	k 1/10W k 1/10W k 1/10W	R2533		TABLE RESISTOR		1/10W	
R857	1-216-113-00	METAL GLAZE	470K 59	% 1/10W	RV1501 RV2501		RES, ADJ, CAR RES, ADJ, CER			

Les composants identifies par une trame et une marque \triangle sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked $ext{\Lambda}$ are critical for safety.

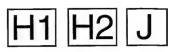
Replace only with the part number specified.



)	REF.NO.	PART NO.	DESCRIPTIO	N		REMARK	REF.NO.	PART NO.	DESCRIPTIO	N.		1	REMARK
		< TH	ERMISTER >					< IC	LINK >				
	TH801	1-216-295-91	METAL GLAZE	0 5%	1/100	Į	PS1851 /1	1-532-727-11 1-532-727-11	LINK, IC ICP	-N5 0.2 -N5 0.2	5A 5A		
		< TRA	NSFORMER >					2016 B 2110 A A A A A A A A A A A A A A A A A A	NSISTOR >	der van Service de de Service de		POR PORTO STATE ST	
	T801	1-437-090-00	HDT	DDDDIME (D	rem \		01040	8-729-920-74	mpangremop 20	200110¥	_OP		
	T803 T804	1-426-897-11 1-426-939-11	TRANSFORMER,	FERRITE (P.	M.T.)		Q1840 Q1841	8-729-017-06	TRANSISTOR 25	3C4793			
	Т805	*8-598-943-00	TRANSFORMER A				Q1851	8-729-920-74					
	T806	1-413-059-00	TRANSFORMER,	FERRITE (D	FT)		Q1854 Q1855	8-729-216-22 8-729-920-74					
	*****	******	******	******	*****	******				**100#			
		*A-1642-132-A	D2 BOARD, COI	MPLETE			Q1856 01857	8-729-017-05 8-729-017-05	TRANSISTOR 25	SA1837			
		R-1042 132 A	******	*****			~	4-382-854-11	SCREW (M3X10)), P, S	W (+)	; Q1857	7
		/ CAD	ACITOR >				Q1858	8-729-017-06 4-382-854-11	TRANSISTOR 2: SCREW (M3X10		W (+)	: 01858	3
1)											, ~	-
,./	C1841	1-130-481-00 1-106-367-00	FILM	0.0068MF 0.01MF	5% 10%	50V 400V	Q1859 Q1860	8-729-216-22 8-729-920-74	TRANSISTOR 2				
	C1844 C1845	1-106-220-00		0.01MF	10%	100V	Q1861		TRANSISTOR 2		×		
	C1851	1-124-910-11	ELECT	47MF	20%	50V		. 2770	ISTOR >				
	C1852	1-124-910-11	ELECT	47MF	20%	50V							
	C1853	1-124-907-11	ELECT	10MF	20%	50V	JR1851	1-216-295-91	METAL GLAZE	0	5%	1/10W	
	C1854 C1855	1-124-910-11	CERAMIC CHIP	47MF 0.01MF	20% 10%	50V 50V	R1841	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
	C1856	1-124-907-11	ELECT	10MF	20%	50V	R1842	1-260-111-11	CARBON	10K	5%	1/2W	
	C1857	1-124-360-00	ELECT	1000MF	20%	16V	R1843 R1844	1-216-057-00 1-216-057-00		2.2K 2.2K	5% 5%	1/10W 1/10W	
) C1858	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V	R1847	1-249-399-11		33	5%	1/4W	F
1	C1859	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V	71040	1-215-875-11	MEMAI OVIDE	10K	5%	1W	F
	C1860 C1861	1-163-989-11	CERAMIC CHIP CERAMIC CHIP	0.033MF	10% 10%	25V 25V	R1848 R1849	1-260-111-11	CARBON	10K	5%	1/2W	r
	C1862	1-124-657-00		10MF	20%	50V	R1851	1-216-429-00	METAL OXIDE	270	5%	1W	F
	01000	1-129-720-00	BILM	0.033MF	5%	630V	R1852 R1853	1-216-089-91 1-216-684-91		47K 24K	5% 0.50%	1/10W 1/10W	
	C1863 C1868	1-162-318-11	CERAMIC	0.001MF	10%	500V							
	C1869	1-106-363-00	MYLAR	0.0068MF	10%	400V 25V	R1854 R1855	1-216-075-00 1-216-429-00	METAL GLAZE	12K 270	5% 5%	1/10W 1W	F
	C1892	1-163-989-11	CERAMIC CHIP	U.USSMF	10%	23V	R1856	1-216-474-11		82	5%	3W	F
_		< CON	NECTOR >				R1861 R1862	1-216-073-00 1-216-045-00		10K 680	5% 5%	1/10W 1/10W	
`	CN1823	*1-573-299-11	CONNECTOR, B	OARD TO BOA	RD 10P		K1002	1-210-045-00	METAL GLAZE	000	3%	1/10%	
/	CN1841	*1-568-878-51	PIN, CONNECT	OR 3P			R1863	1-216-097-00 1-215-875-11	METAL GLAZE	100K 10K	5% 5%	1/10W 1W	F
		< DIC	DE >				R1864 R1865	1-215-875-11		82	5%	3W	
							R1866	1-216-077-00		15K	5%	1/10W	
	D1840 D1841	8-719-302-43	DIODE EL1Z DIODE DAN202	K			R1875	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
	D1851	8-719-110-41	DIODE RD15ES	B2			R1877	1-216-093-00		68K	5%	1/10W	
	D1852		DIODE RD15ES				R1878 R1881	1-260-092-11 1-260-092-11	CARBON	270 270	5% 5%	1/2W 1/2W	
	D1853	8-/19-914-42	DIODE DA204K				R1885	1-216-057-00		2.2K		1/10W	
	D1856		DIODE DAN202	K			R1894	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
	D1867 D1868	8-719-302-43 8-719-302-43					R1895	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
	D1882	8-719-109-89	DIODE RD5.6E				R1896	1-215-867-00	METAL OXIDE	470	5%	1W	
	D1883	8-719-109-89	DIODE RD5.6E	SB2			R1898 R1899	1-216-013-00 1-216-013-00		33 33	5% 5%	1/10W 1/10W	
		< IC	>				KIOJ					_,	
	IC1851	8-759-708-05	IC NJM78L05A					< VAF	RIABLE RESISTO	к >			
\	IC1851	8-759-145-58	IC µPC4558C				RV1851		RES, ADJ, CE				
)) IC1853	8-759-902-21	IC SN74LS221	N			RV1853	1-241-628-11	RES, ADJ, CA	KBON 2.	∠K.		
< COIL >								< TRA	ANSFORMER >				
	L1841 L1843 L1852	1-459-104-00	COIL, DYNAMIC COIL, WITH C COIL (WITH C	ORE	CHOKE		T1851	1-423-786-11	TRANSFORMER,	FERRIT	E (VPC	T)	
							1						



REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION	1		(REMARK
	*A-1644-053-A	VM BOARD, COMPLETE			R1704 R1705	1-249-418-11 1-247-736-11		1.2K 56	5% 5%	1/4W 1/2W	F
C1701	< CAF	ACITOR > 330MF	20%	16V	R1706 R1707 R1709	1-249-414-11 1-249-411-11 1-249-412-11	CARBON	560 330 390	5% 5% 5%	1/4W 1/4W 1/4W	F
C1704 C1705 C1706 C1707	1-161-830-00 1-124-120-11 1-123-935-00 1-124-907-11	CERAMIC 0.0047MF ELECT 220MF ELECT 33MF	20% 20% 20%	500V 16V 160V 50V	R1710 R1711 R1712	1-249-385-11 1-249-432-11 1-216-085-00	CARBON	2.2 18K 33K	5% 5%	1/4W 1/4W 1/10W	F
C1707 C1708 C1709 C1710		CERAMIC CHIP 0.047MF MYLAR 0.001MF	10% 10%	50V 50V 250V	R1713 R1714 R1715 R1716	1-249-436-11 1-249-429-11 1-216-476-11 1-249-417-11	CARBON CARBON METAL OXIDE	39K 10K 180 1K	5% 5% 5% 5%	1/4W 1/4W	F
C1711 C1712	1-162-318-11 1-124-799-11	CERAMIC 0.001MF	10% 20%	500V 160V	R1717 R1718	1-249-432-11 1-249-412-11	CARBON CARBON	18K 390	5% 5%	1/4W 1/4W	
C1713 C1714 C1716	1-162-318-11 1-136-203-11 1-124-907-11	FILM 0.01MF ELECT 10MF	10% 10% 20%	500V 250V 50V 50V	R1719 R1720 R1721	1-249-416-11 1-216-097-00 1-249-414-11		820 100K 560	5% 5% 5%	1/4W 1/10W 1/4W	
C1717 C1718 C1719	1-102-824-00 1-124-120-11 1-124-907-11		5% 20% 20%	16V 50V	R1722 R1723 R1724	1-249-385-11 1-249-429-11 1-249-436-11	CARBON	2.2 10K 39K	5% 5% 5%	1/4W 1/4W 1/4W	F
C1722	1-102-980-00	CERAMIC 270PF NECTOR >	10%	50V	R1725 R1726	1-249-413-11 1-249-410-11	CARBON	470 270	5% 5%	1/4W 1/4W	
CN1819 CN1830	*1-568-880-51	PIN, CONNECTOR 5P PIN, CONNECTOR 3P			R1727 R1729 R1731 R1732	1-249-402-11 1-216-451-11 1-249-420-11 1-249-426-11	METAL OXIDE CARBON	56 120 1.8K 5.6K	5% 5% 5% 5%	1/4W 2W 1/4W 1/4W	F F
	< DIO	DE >			R1735	1-249-415-11	CARBON	680	5%	1/4W	
D1701 D1702 D1703	8-719-914-43	DIODE DAN202K DIODE DAN202K DIODE DAP202K			R1736	1-247-807-31		100	5% ****	1/4W	****
D1704 D1705	8-719-982-37	DIODE MTZJ-39C DIODE MTZJ-39C				*A-1646-079-A	H1 BOARD, COM				
D1706 D1707		DIODE DAP202K DIODE DAP202K				< CAP	ACITOR >				
	< COI	L >			C081 C082		CERAMIC CHIP			5% 5%	50V 50V
L1702	1-408-410-00				C083 C087	1-163-037-11	CERAMIC CHIP CERAMIC CHIP	0.022M		10% 10%	25V 25V
		NSISTOR >				< CON	NECTOR >				
Q1701 Q1702 Q1703	8-729-216-22 8-729-017-05	TRANSISTOR BF199 TRANSISTOR 2SA1162-G TRANSISTOR 2SA1837 SCREW (M3X10), P, SW (: ±\ • 017:	กร	CN1008 CN1051	*1-564-513-11 *1-568-879-11	PLUG, CONNECTO	OR 10P R 4P			
Q1704		TRANSISTOR 2SC2412K-QR		03		< COI	L >				
Q1705 Q1706	4-382-854-11	TRANSISTOR 2SC4793 SCREW (M3X10), P, SW (TRANSISTOR 2SC2412K-QR	+) ; Q17	05	L081 L082	1-408-409-00 1-408-409-00		10UH 10UH			
Q1707	8-729-142-86	TRANSISTOR 2SC3733				< RES	ISTOR >				
Q1708		TRANSISTOR BF199			JR1	1-216-295-91	METAL GLAZE	0	5%	1/10W	
Q1709		TRANSISTOR 2SC2551-0			R081	1-216-073-00		10K	5%	1/10W	
	< RES	ISTOR >			R082 R083	1-216-065-00 1-216-057-00		4.7K 2.2K	5%	1/10W 1/10W	
JR1701 JR1702 JR1703	1-216-295-91 1-216-295-91 1-216-296-91	METAL GLAZE 0 5%	1/10	W	R084 R085	1-216-202-00 1-216-202-00		1.5K		1/8W 1/8W	
JR1751	1-216-296-91					< SOC	KET >				
R1701 R1702 R1703	1-247-807-31 1-249-413-11 1-247-807-31	CARBON 470 5%	1/4W		J81 J82	1-568-678-11 1-562-837-11	TERMINAL BLOC JACK	K, S 31	P		



REF.NO.	PART NO.	DESCRIPTION		REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK
S081	1-571-532-21	TCH >			C925 C926 C928	1-124-477-11 1-164-346-11 1-124-477-11	CERAMIC CHIP 1MF	20% 20%	16V 16V 16V
S082 S083		SWITCH, TACTIL SWITCH, TACTIL			C929 C930	1-124-477-11 1-124-477-11	ELECT 47MF ELECT 47MF	20% 20%	16V 16V
******	*******	******	******	*****	C931 C932	1-164-346-11	CERAMIC CHIP 1MF CERAMIC CHIP 1MF		16V 16V
	*A-1646-080-A	H2 BOARD, COMPL			C2701	1-124-907-11		20%	50V
	*4-374-987-01 4-381-686-01	GUIDE, LIGHT BRACKET (B), LI	GHT GUIDE		C2702 C2703 C2706	1-124-477-11 1-124-477-11 1-163-003-11	ELECT 47MF ELECT 47MF CERAMIC CHIP 330PF	20% 20% 10%	25V 25V 50V
	< CON	NECTOR >					NECTOR >		
CN1132	1-564-511-11	PLUG, CONNECTOR	8P		CN1208 CN1209		PLUG, CONNECTOR 10P CONNECTOR, BOARD TO BOAR	RD 40P	
	< DIO			•	CN1210 CN1240	*1-564-522-11 *1-564-519-11	PLUG, CONNECTOR 7P PLUG, CONNECTOR 4P	**	
D092	8-719-948-31 *4-201-076-01	DIODE LD-201VR HOLDER, LED; D	092		CN2701		PLUG, CONNECTOR 3P		
D093 D094	8-719-948-31	DIODE LD-201VR DIODE LD-201VR			CN2702	*1-564-506-11	PLUG, CONNECTOR 3P		
2031	< IC					< DIC	DE >		
IC091		IC SBX1610-11			D401 D403 D405	8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1 DIODE MTZJ-9.1		
	< RES	SISTOR >			D405 D406 D407	8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1		
)R091	1-216-190-00	METAL GLAZE 4	70 5% 1/	8W	D903	8-719-921-69	DIODE MTZJ-9.1		
******	*******	*******	******	******	D904 D907	8-719-921-69 8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1		
	*A-1651-067-A	J BOARD, COMPLE	TE **		D908 D909	8-719-921-69 8-719-921-69	DIODE MTZJ-9.1	•	
	< CAF	PACITOR >			D910 D911	8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1		
C295 C296 C401 C402 C403	1-163-009-11 1-164-005-11 1-126-101-11	CERAMIC CHIP 0. CERAMIC CHIP 0. CERAMIC CHIP 0. ELECT 10 CERAMIC CHIP 0.	001MF 10% 47MF 0MF 20%	50V 16V	D913 D914 D915	8-719-921-69 8-719-921-69 8-719-921-69 8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1 DIODE MTZJ-9.1		
C410	1-124-917-11	ELECT 33	MF 20%		D917 D924	8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1		
C421 C422 C423	1-124-910-11 1-124-910-11 1-163-031-11	ELECT 47 ELECT 47 CERAMIC CHIP 0.	MF 20% MF 20% 01MF		D925 D926	8-719-921-69 8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1		
C424	1-163-129-00		10PF 5%	50V	D927 D928	8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1		
C425 C426 C427 C428	1-163-129-00 1-124-477-11 1-164-346-11 1-164-346-11	ELECT 47 CERAMIC CHIP 1M	/MF 20% IF		D930 D931 D2701	8-719-921-69	DIODE MTZJ-9.1 DIODE MTZJ-9.1 DIODE DAP202K		
C429	1-124-119-00		30MF 20%	6 16V		< IC	>		
C906 C910 C911 C912 C913	1-101-004-00 1-163-017-00 1-163-017-00 1-163-129-00 1-163-129-00	CERAMIC CHIP 0. CERAMIC CHIP 0. CERAMIC CHIP 33	.0047MF 10% BOPF 5%	50V 50V	IC401 IC402 IC2701 IC2702	8-759-073-00 8-759-603-37 8-759-701-59	IC M5216P IC NJM78M09FA		
C914	1-163-129-00			50V			CKET >		
C915 C916 C917 C922	1-163-129-00 1-163-011-11	CERAMIC CHIP 33 CERAMIC CHIP 0. CERAMIC CHIP 0.	30PF 5% .0015MF 10%	50V 50V 50V	J291 J903 J905	1-695-550-11 1-695-293-11	SOCKET 21P		
C923	1-164-346-11	CERAMIC CHIP 1		16V	0404		ANSISTOR >		
C924	1-124-477-11	ELECT 47	7MF 209	% 16V	Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR		

J												
REF.NO.	PART NO.	DESCRIPTION	<u>V</u>	RI	MARK	REF.NO.	PART NO.	DESCRIPTIO	N		REMA	RK
Q402 Q403 Q404 Q2701	8-729-920-74 8-729-920-74 8-729-920-74 8-729-920-74	TRANSISTOR 25	C2412K-Q C2412K-Q	R R		R937 R938 R939	1-216-113-00 1-216-039-00 1-216-039-00	METAL GLAZE MÉTAL GLAZE METAL GLAZE	470K 390 390	5% 5% 5%	1/10W 1/10W 1/10W	
22701		SISTOR >				R940 R941	1-216-063-00 1-216-113-00	METAL GLAZE METAL GLAZE	3.9K 470K	5% 5%	1/10W 1/10W	
JR401	1-216-295-91	METAL GLAZE				R942 R943	1-216-039-00 1-216-089-91	METAL GLAZE METAL GLAZE	390 47K	5% 5%	1/10W 1/10W	
JR402 JR403 JR404 JR405	1-216-295-91 1-216-295-91 1-216-295-91 1-216-295-91	METAL GLAZE	0 5 0 5	% 1/10W % 1/10W % 1/10W % 1/10W		R944 R945 R959	1-216-039-00 1-216-089-91 1-216-674-11	METAL GLAZE METAL GLAZE METAL CHIP	390 47K 9.1K	5% 5% 0.50%	1/10W 1/10W 1/10W	
JR406 JR2751	1-216-295-91 1-216-296-91	METAL GLAZE METAL GLAZE		% 1/10W % 1/8W		R960 R968 R969	1-216-674-11 1-216-055-00 1-216-055-00	METAL CHIP METAL GLAZE METAL GLAZE	1.8K	0.50% 5% 5%	1/10W 1/10W 1/10W	
R291 R292 R297 R298 R402	1-216-190-00 1-216-190-00 1-216-296-91 1-216-296-91 1-216-158-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	470 5 0 5 0 5	% 1/8W % 1/8W % 1/8W % 1/8W % 1/8W		R970 R977 R2701 R2702 R2703	1-216-055-00 1-216-055-00 1-216-081-00 1-216-081-00 1-216-081-00	METAL GLAZE	1.8K 1.8K 22K 22K 22K	5% 5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	Ű,
R403 R404 R405 R406 R407	1-216-025-00 1-216-158-00 1-216-025-00 1-216-158-00 1-216-025-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	22 5 100 5 22 5	% 1/10W % 1/8W % 1/10W % 1/8W % 1/10W		R2704 R2705 R2706 R2707 R2708	1-216-081-00 1-216-073-00 1-216-073-00 1-216-295-00 1-216-073-00	METAL GLAZE	22K 10K 10K 0K 10K	5% 5% 5% 5%	1/10W 1/10W 1/10W 1/10W 1/10W	
R410 R411 R412 R413 R414	1-216-025-00 1-216-025-00 1-216-022-00 1-216-022-00 1-216-022-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	100 5 75 5 75 5	% 1/10W % 1/10W % 1/10W % 1/10W % 1/10W		******	******	******	*****	*****	*****	***
R416 R417 R419 R420 R421	1-216-113-00 1-216-067-00 1-216-113-00 1-216-067-00 1-216-171-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	5.6K 5 470K 5 5.6K 5	% 1/10W								
R422 R423 R424 R425 R428	1-216-093-00 1-216-015-00 1-216-025-00 1-216-025-00 1-249-393-11	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE CARBON	39 5 100 5 100 5	% 1/10W % 1/10W % 1/10W % 1/10W % 1/4W	7							
R429 R430 R431 R432 R433	1-216-065-00 1-216-065-00 1-216-065-00 1-216-065-00 1-216-296-91	METAL GLAZE	4.7K 5 4.7K 5 4.7K 5 4.7K 5	% 1/10W % 1/10W								
R911 R921 R922 R923 R924	1-216-022-00 1-216-022-00 1-216-222-00 1-216-039-00 1-216-039-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	75 5 10K 5 390 5	% 1/10W % 1/10W % 1/8W % 1/10W % 1/10W								
R925 R926 R927 R928 R929	1-216-089-91 1-216-039-00 1-216-039-00 1-216-089-91 1-216-063-00	METAL GLAZE	390 5 390 5	% 1/10W % 1/10W % 1/10W % 1/10W % 1/10W						*		
R930 R931 R932 R933 R934	1-216-113-00 1-216-063-00 1-216-113-00 1-216-073-00 1-216-063-00	METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE METAL GLAZE	470K 5 3.9K 5 470K 5 10K 5 3.9K 5	% 1/10W % 1/10W % 1/10W								
R935 R936	1-216-022-00 1-216-171-00	METAL GLAZE		% 1/10W % 1/8W				~	1			

REMARK

DESCRIPTION

Les composants identifies par une trame et une marque i sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie. The components identified by shading and marked ! are critical for safety.

Replace only with the part number specified.

REF.NO.

PART NO.

DESCRIPTION REF.NO. PART NO. REMARK MISCELLANEOUS t 1-406-807-11 COIL, DEMAGNETIZATION 1-452-032-00 MAGNET, DISK; 10MM 1-452-094-00 MAGNET, ROTATABLE DISK; 15MM Ø 1-452-509-11 NECK ASSY, PICTURE TUBE (NA-308) 1-504-507-11 SPEAKER (5CM) 1-543-619-41 CORE, RING 1-571-433-12 SWITCH, PUSH (AC POWER) 1-590-460-11 CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-X2993B, X2993E) 1-693-185-11 TUNER (UV916H) 1-751-680-11 CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-X2991A, X2991D) 1 8-451-444-11 DEFRECTION YOKE Y29GXC 8-598-943-00 TRANSFORMER ASSY, PLYBACK (NX-2661//UB2) V901 7 8-733-853-05 PICTURE TUBE SD-269 (M68LCT60X) ACCESSORIES AND PACKING MATERIALS *4-039-906-01 BAG, PROTECTION *4-042-126-01 CUSION (UPPER) (ASSY) *4-042-127-01 CUSION (LOWER) (ASSY) *4-042-128-01 INDIVIDUAL CARTON 4-202-828-11 MANUAL, INSTRUCTION (KV-X2991D)
(GERMAN/ENGLISH/FRENCH/DUTCH/ITALIAN) 4-202-828-41 MANUAL, INSTRUCTION (KV-X2991A) 4-202-828-51 MANUAL, INSTRUCTION (KV-X2993B) (FRENCH/GERMAN/ITALIAN) 4-202-828-71 MANUAL, INSTRUCTION (KV-X2991D) (SPANISH) 4-202-828-81 MANUAL, INSTRUCTION (KV-X2993E) (FRENCH/DUTCH/SWEDISH/DANISH/FINISH/ NORWEGIAN/PORTUGUESE) REMOTE COMMANDER 1-466-854-41 REMOTE COMMANDER (RM-860) 9-903-664-01 POCKET, COVER 1-467-272-21 COMMANDER, STANDARD TYPE (RM-831) 9-903-466-01 POCKET, COVER

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Consumer A & V Products Company
TV & Display Products Div.

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SERVICE MANUAL

AE-2F CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.	
KV-X2991A	RM-831	Italian	SCC-G76C-A	KV-X2993E	RM-831	Spanish	SCC-G78C-A	
KV-X2993B	RM-831	French	SCC-G75C-A					,
KV-X2991D	RM-831	AEP	SCC-G72D-A					

SUPPLEMENT - 1

SUBJECT: CHANGE OF PART NUMBERS

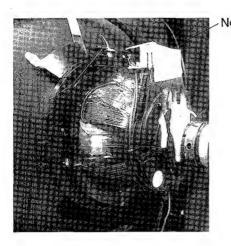
File this supplement with the service manual

INTRODUCTION:

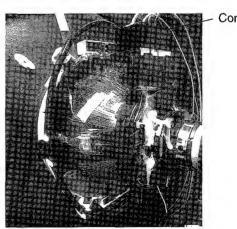
Change in CRT type from GX to GX2. Identified by different Deflection yolks. The Service Manual part no 9-974-854-01 covers the GX CRT version. The following differences would apply to models fitted with the GX2 CRT type.

HOW TO IDENTIFY:

GX CRT VERSION



No Connector



GX2 CRT VERSION

TRINITRON® COLOR TV SONY®



The components identified by shading and marked $ilde{\Lambda}$ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque 🐧 sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

GX CRT VERSION

GX2 CRT VERSION

	*A-1642-132-A	D2 BOARD, COMPLETE			for	*A-1642	2-132-A	D2 BOARD, COMPLETE	
	< CAI	PACITOR >				No.	< CAP	ACITOR >	
C1852 C1853 C1855 C1856 C1857	1-124-910-11 1-124-907-11 1-164-232-11 1-124-907-11 1-124-360-00	ELECT 10MF CERAMIC CHIP 0.01MF ELECT 10MF	20% 50 20% 50 10% 50 20% 50 20% 16	V V	Not fi Not fi Not fi Not fi	tted tted tted	*.		
C1858 C1859 C1860 C1861 C1862	1-163-275-11 1-163-989-11	CERAMIC CHIP 0.001MF CERAMIC CHIP 0.003MF CERAMIC CHIP 0.033MF CERAMIC CHIP 0.033MF ELECT 10MF	5% 50 5% 50 10% 25 10% 25 20% 50	V V	Not fi Not fi Not fi Not fi	tted tted tted			
C1863 C1868 C1869 C1892	1-129-720-00 1-162-318-11 1-106-363-00 1-163-989-11	CERAMIC 0.001MF	10% 50	0V	Not fi Not fi Not fi Not fi	tted tted			
	< DIO	DDE >					< DIO	DE >	
D1841 D1851 D1852 D1853 D1856	8-719-110-41 8-719-110-41 8-719-914-42	DIODE DAN202K DIODE RD15ESB2 DIODE RD15ESB2 DIODE DA204K DIODE DAN202K			Not fi Not fi Not fi Not fi Not fi	tted tted tted			
D1867 D1882 D1883	8-719-109-89	DIODE EL1Z DIODE RD5.6ESB2 DIODE RD5.6ESB2			Not fi Not fi Not fi	tted			
	< JUM	MPER WIRE >					< JUM	PER WIRE >	
JW1803/1	.804/1805/1811/1	1812/1814/1816/1817 JUM	PER WIRE		JW1803	/1804/1805	5/1811/18	312/1814/1816/1817	Not fitted
	< IC	>					< IC :	•	
IC1852 IC1853	8-759-145-58 8-759-902-21	IC µPC4558C IC SN74LS221N			Not fi Not fi				
	< COI	IL >					< COI	· >	
L1852	1-459-390-00	COIL (WITH CORE)			Not fi	tted			
	< IC	LINK >					< IC I	LINK >	
PS1852	1-532-727-11	LINK, IC ICP-N5 0.25A			Not fi	tted			
	< TRA	ANSISTOR >					< TRAI	NSISTOR >	
Q1840 Q1851 Q1854 Q1855 Q1856	8-729-920-74 8-729-216-22 8-729-920-74	TRANSISTOR 2SC2412K-QR TRANSISTOR 2SC2412K-QR TRANSISTOR 2SA1162-G TRANSISTOR 2SC2412K-QR TRANSISTOR 2SA1837			Not fi Not fi Not fi Not fi Not fi	tted tted tted			
Q1857 Q1858 Q1859	4-382-854-11 8-729-017-06	TRANSISTOR 2SA1837 SCREW (M3X10), P, SW (- TRANSISTOR 2SC4793 SCREW (M3X10), P, SW (- TRANSISTOR 2SA1162-G			Not fi Not fi Not fi Not fi Not fi	tted tted tted			
	0-129-210-22	INMEDION ADMITUZ C		l l					

The components identified by shading and marked $ilde{\Lambda}$ are critical for safety. Replace only with the part number

specified.

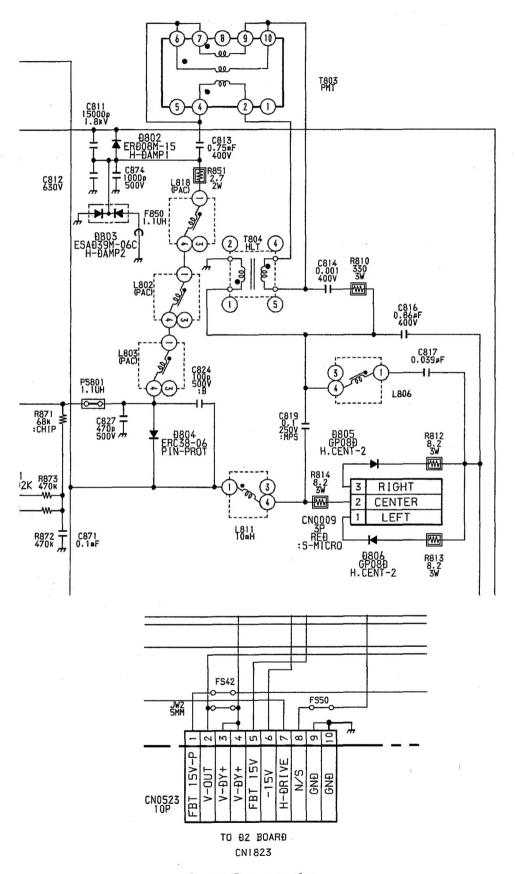
Les composants identifies par une trame et une marque 🛕 sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

GX CRT VERSION

GX2 CRT VERSION

								Т							<i>'</i>
< RESISTOR >											< RE	SISTOR >			
JR1851	1-216-295-91	METAL GLAZE	0	5%	1/10W			Not	fi	tte	i				
R1851 R1852 R1853	1-216-429-00 1-216-089-91 1-216-684-91		270 47K 24K		1W 1/10W 1/10W	F		Not Not	fi fi	tted tted	i i				
R1854 R1855	1-216-075-00 1-216-429-00	METAL GLAZE METAL OXIDE	12K 270	5% 5%	1/10W 1W	F				tted tted					
R1856 R1861 R1862 R1863 R1864	1-216-474-11 1-216-073-00 1-216-045-00 1-216-097-00 1-215-875-11	METAL GLAZE METAL GLAZE METAL GLAZE	82 10K 680 100K 10K	5% 5% 5% 5% 5%	3W 1/10W 1/10W 1/10W 1W	F F	Α.	Not Not Not	fi fi fi	tted tted tted tted	1 1 1				
R1865 R1866 R1875 R1877 R1878	1-216-474-11 1-216-077-00 1-216-673-11 1-216-093-00 1-260-092-11	METAL GLAZE METAL CHIP METAL GLAZE	82 15K 8.2K 68K 270	5% 5% 0.50% 5% 5%	3W 1/10W 1/10W 1/10W 1/2W	F	1 40	Not Not Not	fi fi fi	tted tted tted tted	1 1 1				
R1881 R1885 R1894 R1895 R1896	1-260-092-11 1-216-057-00 1-216-073-00 1-216-097-00 1-215-867-00	METAL GLAZE METAL GLAZE METAL GLAZE	270 2.2K 10K 100K 470	5% 5% 5% 5% 5%	1/2W 1/10W 1/10W 1/10W 1W	F		Not Not Not	fi fi fi	tted tted tted tted	1 1 1				
R1898 R1899	1-216-013-00 1-216-013-00	METAL GLAZE	33 33	5% 5%	1/10W 1/10W					tted tted					
	< VAF	RIABLE RESISTOR	? >								< VAI	RIABLE RESISTO	OR >		
RV1853	1-241-628-11	RES, ADJ, CEF	RMET 2.	2K				Not	fi	tted	i				
	< TRA	NSFORMER >									< TR	ANSFORMER >			
T1851	1-423-786-11	TRANSFORMER,	FERRIT	E (VPO	T)			Not	fi	tted	i				
******	*******	*******	*****	*****	*****	****	***	***	***	****	*******	******	******	*****	*****
	*A-1642-131-A	D BOARD COMPI								,	A-1642-131-A	D BOARD COME			
	< CAF	PACITOR >									< CAl	PACITOR >			
C816 C817	1-109-961-11 Not fitted	FILM	0.75MF		5%	400V		C81 C81			1-107-804-11 1-137-496-11		0.86MF 0.39MF	5% 5%	400V 400V
	< JUM	MPER WIRE >									< JUI	MPER WIRE >			
JW2	Not fitted							JW2			5MM JUMPER W	IRE			
	< COI	L >									< CO	IL >			
L806	Not fitted							L80	6		1-459-592-11	COIL WITH CO	ORE (PMC)		
	< TRA	NSFORMER >									< TRA	ANSFORMER >			
T804	1-426-939-11	ньт						T80	4		1-426-287-11	HLT			
******	******	******	*****	*****	*****	*****	***	***	***	****	*********	*******	*****	******	******
		MISCELLANEOUS										MISCELLANEOU			
4	1-452-509-11 NECK ASSY, PICTURE TUBE (NA-308) 1 8-451-444-11 DEFLECTION YOLK Y29GXC V901 1 8-733-853-05 PICTURE TUBE SD-269 (M68LCT60X) 3								1	L L	8-451-466-11 8-733-856-01	NECK ASSY, F DEFLECTION Y PICTURE TUBE PICTURE TUBE (ITC COMPLET	OLK Y29GXC2 GX2 GX2 (ITC 2	3 9GX2-C1)	

D BOARD CIRCUIT CHANGES



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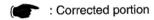
AE-2F CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-X2991A	RM-831	Italian	SCC-G76C-A	KV-X2993E	RM-831	Spanish	SCC-G78C-A
KV-X2993B	RM-831	French	SCC-G75C-A		3		
KV-X2991D	RM-831	AEP	SCC-G72D-A				

CORRECTION - 1

SUBJECT: HOW TO ENTER INTO SERVICE MODE

File this supplement with the service manual



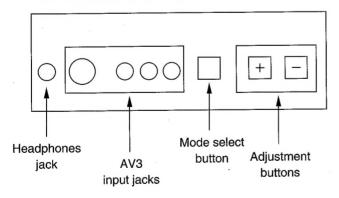
INCORRECT

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-831.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set. Then press button of the remote commander twice.



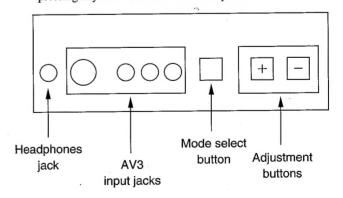
CORRECT

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-831.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.





9-974-854-91

Sony Corporation

Consumer A & V Products Company

TV & Display Products Div.

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